

DOCUMENT RESUME

ED 040 289

VT 011 187

AUTHOR Moore, Larry F.  
TITLE Guidelines for Manpower Managers, A Selected  
Annotated Bibliography. Monograph Series Number 3.  
INSTITUTION University of British Columbia, Vancouver (Canada).  
PUB DATE 69  
NOTE 81p.  
  
EDRS PRICE MF-\$0.50 HC-\$4.15  
DESCRIPTORS \*Annotated Bibliographies, \*Management, \*Manpower  
Development, Manpower Needs, Occupational Tests,  
Performance Factors, Personnel Evaluation, \*Systems  
Approach

ABSTRACT

This annotated bibliography presents 323 citations of periodical articles and some monographs ranging in date from 1962 to 1968, which describe changes and developments in management thought with implications for manpower management. Listings are arranged alphabetically by author in the subject groupings of: (1) Manpower Systems, (2) Manpower Requirements (planning and forecasting, job design and analysis, recruiting and selection), (3) Performance Evaluation, (4) Manpower Development, (5) Compensation and Reward, (6) Testing and Measurement, (7) Computer Assistance in Manpower Management, and (8) Miscellaneous. Individual entries include author, title, name of journal, volume number, issue number, year, page listing, and an annotation. The bibliography is designed for both practicing managers and students in the field of manpower management. (CH)

Number 3

Monograph Series

1969

ED0 40289

GUIDELINES  
FOR  
MANPOWER MANAGERS  
A Selected Annotated Bibliography

*by*

LARRY F. MOORE  
Associate Professor of Industrial Relations

*With Financial Assistance from*  
The Institute of Industrial Relations,  
University of British Columbia

U.S. DEPARTMENT OF HEALTH, EDUCATION  
& WELFARE  
OFFICE OF EDUCATION  
THIS DOCUMENT HAS BEEN REPRODUCED  
EXACTLY AS RECEIVED FROM THE PERSON OR  
ORGANIZATION ORIGINATING IT. POINTS OF  
VIEW OR OPINIONS STATED DO NOT NECES-  
SARILY REPRESENT OFFICIAL OFFICE OF EDU-  
CATION POSITION OR POLICY.

*Published by*  
Faculty of Commerce and Business Administration  
University of British Columbia  
Vancouver 8, B.C., Canada

## TABLE OF CONTENTS

Section Heading	Relevant Subjects	Page
Introduction		
1. Manpower Systems	Manpower department organization and systems; in-company manpower controls; role of the personnel manager; accounting for human resources; the personnel function.	3
2. Manpower Requirements	2-A. Planning and forecasting manpower needs.	9
	2-B. Job design and analysis; skill inventory.	10
	2-C. Recruiting and selection concepts and techniques (including aspects of application evaluation, testing, interviewing).	16
3. Performance Evaluation	Measurement of human performance; assessment of potential; influence of various factors on performance.	27
4. Manpower Development	Concepts and techniques of training; determining training needs and objectives; learning; motivation; management development.	41
5. Compensation and Reward	Human needs; types of compensation; motivational effects; fringe benefits; rewards and equity; relative job worth.	53
6. Testing and Measurement	Test construction; measures of reliability and validity; developments in testing application.	61
7. Computer Assistance in Manpower Management	Computer uses in manpower system development; computer models for analysis and control; impact on the personnel department.	75
8. Miscellaneous	Selected articles which treat specialized and unique aspects of manpower management.	79

## INTRODUCTION

One of the most difficult tasks facing a manager is that of keeping up with changes and developments in management thought. At the same time, the student, in preparing himself for a managerial role, must become familiar with current materials drawn from a number of sources. For both groups, the annotated bibliography becomes an extremely valuable assisting device.

This bibliography is designed for both the practising manager and the student in the field of Manpower Management. The 320 annotated references have been classified under eight section headings according to subject groupings within Manpower Management. In Section II, further subclassification seemed appropriate. For each reference, major orientation of the subject matter was the determining factor in classification. The reader will notice that the classification headings reflect the recent increasing interest in Manpower Systems (Section 1) and Computer Assistance in Manpower Management (Section 7). The references are primarily articles selected from a wide range of periodical literature; and additionally, several monograph references. No books have been included.

The references selected for inclusion were chosen on the basis of their perceived contributions in advancing the theory, research, and application in the Manpower Management area. The bibliography does not pretend to include all the relevant current articles in this field. Moreover, the scope of coverage does not extend into the very broad area of Labour-Management Relations.

Individual entries include author, title, name of the journal, volume number, issue number, year, page listing, and a short description of the contents. Within each of the eight sections, the entries are alphabetized according to author and are numbered for easy location.

The development of this bibliography was made possible by a research grant from the Institute of Industrial Relations, University of British Columbia. Miss Gail Mathias and Miss Helen Chan, Research Assistants in the Faculty of Commerce and Business Administration, aided greatly in the compilation of bibliographic materials.

## 1. MANPOWER SYSTEMS

- 1-1. Adams, H.F., "The Purpose of the Personnel Function," Personnel Administration, 26(5), 1963, 21-29.  
Discusses employment, training, salary and wage administration, promotions, labor relations, safety, morale building activities.
- 1-2. American Management Association, Personnel Division. A Look at Personnel Through The President's Eye. New York: American Management Association, Management Bulletin No. 66, 1965.  
Based on a series of interviews with company presidents and personnel executives, the bulletin discusses measures the president would take to improve the personnel function (areas discussed include recruiting, management development, morale, labor relations).
- 1-3. American Management Association, Personnel Division. The Systems Approach to Personnel Management, New York: American Management Association, Management Bulletin No. 62, 1965.  
Includes articles on the total-system approach, the personnel systems concept and the impact of technology on manpower demand and supply.
- 1-4. Ash, Philip, "Measurement of Industrial Relations Activities" Journal of Applied Psychology, 51(5), 1967, 387-392.  
Forty-three major corporations provided data on organization structure and employment and responses to a 38-item industrial relations activities scale. Wide variations were found in the range of activities undertaken by the industrial relations department. There were consistent and significant differences with respect to centralization as among specific industrial relations activities. A promising scale for the measurement of organizational centralization and activity level in the industrial relations function has been developed.
- 1-5. Benson, E.P., "Recent Changes in the Approach to Personnel Management in the Canadian Public Service," Public Psychological Review, Vol. 28, October, 1967, 216-21.  
Public Service Staff Relations Act brings about collective bargaining, expansion of merit system, decentralized staffing and redistribution of authority over personnel.
- 1-6. Berlin, S.S., "Is Centralized Control of Personnel Management on the Upswing?" Personnel Administration, 30(1), 1967, 36-40.  
Some observations which seem germane to the question of decentralized or centralized control of the personnel management function have been reviewed. The article points out the need (1) for a



more precise definition of the personnel function and (2) for relating decentralization practices in the manpower field to the present and future mission of the organization.

- 1-7. Brown, D.S., "The Personnel Officer's New Dilemma," Personnel Administration 27(4), 1964, 6-11.

The personnel office's problem of dynamic programming vs. paper processing is discussed. Constructive suggestions to implement higher-level programming goals are presented, e.g., cutting back personnel functions, improving internal management practices, transfer of personnel operating functions to line divisions, separation of personnel operations functions from employee development, and increasing the size of the personnel office.

- 1-8. Ehrle, R.A., "Personnel Classification, Selection, Prediction and Counseling," Personnel Administration, 27(6), 1964, 39-41.

This paper briefly discussed several common personnel responsibilities including classification, selection, prediction and counseling.

- 1-9. Flatt, W.L. and Lott W.B., "Quality in the Work Force," Personnel Administration, 26(5), 1963, 54-58.

Discusses ways in which a personnel office "tailor made" self-evaluation or the self-audit can be a meaningful and useful tool in augmenting the quality of the personnel program.

- 1-10. Gibbons, C.C., "Control — A Neglected Dimension of Personnel Administration," Personnel Administration, 27(3), 1964, 12-15.

The areas in personnel requiring control are working conditions, hours of work, training and development, salary administration and employee morale. The means to achieve control are discussed.

- 1-11. Griffin, John F., "Management Information Systems — A Challenge to Personnel," Personnel Journal, 46(5), June, 1967, 371-373.

Discusses the personnel administrator's responsibilities for providing managerial education; for planning the effect on the organization structure; and for using available techniques to better fulfill the personnel function.

- 1-12. Gruber, W.H., "Behavioral Science, Systems Analyses and the Failure of Top Management," Industrial Management Review, Fall, 1966, 37-47.

Top management has failed to utilize effectively the available resources of their behavioral science and systems analysis staffs. This paper makes manifest the consequences of top management's failure. Also discussed are the benefits that could be derived from integrating

an organization's behavioral science and systems analysis capabilities. Problems of implementation are examined.

- 1-13. Heiser, R.T., "Auditing the Personnel Function in a Decentralized, Multi-unit Organization," Personnel Journal, 47(3), 1968, 180-183.

Describes the purpose of and approach to maintaining a system of information about personnel activities. The auditing system in this article was designed to fit the specific needs of one organization, but might be modified and adopted for use in other companies. Seven steps in this auditing system are described. The information gathered is concerned with the results of personnel activities (e.g., turnover). An attitude survey may be used as part of the audit. Standards, problems and benefits are discussed.

- 1-14. Hekimian, James S. and Jones, Curtis H., "Put People on Your Balance Sheet," Harvard Business Review, 41(1), 1967, 105-113.

Employees should be conceived of and valued as assets. Analytic and conceptual approaches designed for the management of physical or monetary assets can be applied to the management of human resources. The following action program is advanced for manpower accounting:

- 1) explore alternate uses for scarce human resources develop long term plans of asset requirements.
- 2) work out means of encouraging and rewarding the development of skills in subordinates.
- 3) make explicit personnel development plans.
- 4) experiment with a program of trying to place a value on certain key employees.

- 1-15. Kelley, R.T., "Accounting in Personnel Administration," Personnel Administration, 30(3), 1967, 24-28.

Points out the need for accounting in the personnel field, i.e., cost-benefit analyses of job evaluation, training, employee benefits, management development, union relations.

- 1-16. Rosenthal, H.A., "In Defense of Central Control of Public Personnel Policy," Public Personnel Review, Vol. 28, October 1967, 237-41.

The argument for central control is developed by a point by point attack on claims made by supporters of decentralization.

- 1-17. Rushing, William A., "Organizational Rules and Surveillance: Propositions in Comparative Organizational Analysis," Administrative Science Quarterly, March, 1966, 423-443.

An attempt is made to formulate a series of propositions dealing with the relationship between surveillance and organizational rules and with the relationship between these two variables and variables such as size,

physical distance, participant supply and demand and organizational conflict. The propositions are put forward for organizations of all types but as yet lack empirical research supporting them.

- 1-18. Scanlan, B., "Control of Labor Costs by the Personnel Officer," Personnel Administration, 28(5), 1965, 18-21.

A 191 firm survey of programs designed to reduce personnel costs, points up opportunities for personnel offices to integrate their activities with overall mission accomplishment. Points out the necessity of avoiding over-staffing, securing qualified people to fill vacancies, control of labor turnover and control of absenteeism.

- 1-19. Thompson, Victor A., "Bureaucracy and Innovation," Administrative Science Quarterly, June 1965, 1-20.

Bureaucratic structures emphasize productivity and control and were found inappropriate for creativity. Suggestions are made for alteration in bureaucratic structures to increase innovativeness such as increased professionalization, looser company structures, decentralization, freer communications, project organization, rotation of assignments, greater reliance on group processes, modification of the incentive system and changes in management practices. It is suggested that bureaucratic organizations are actually evolving in this direction.

- 1-20. Tulk, A.V., "Information Systems for Better Management of Manpower Resources," In American Management Association, Administrative Services Division, Management Bulletin 79, 1966, 59-64.

Describes Dow Chemical's EDP task force and how it is used to match an individual employee to an individual job assignment (discussion includes skills inventory, performance appraisal, job descriptions).

- 1-21. Wood, Thomas L. and Shaw, L.E., "Survey of Company Support and Services Functions," Personnel Journal, 47(5), 1968, 347-348.

This pilot survey of 16 electronic research and engineering firms endeavors to develop manpower allocations for support departments as compared to gross sales and total personnel strength. Average ratios for the support departments are given. This data may provide a yardstick for other companies to determine manpower allocations to support departments.

- 1-22. Wood, W.D., "The Current I.R. Scene and the Personnel Function", (editorial) Canadian Psychological and Industrial Relations Journal, 14(4), September 1967, 13-21.

Changes, which industrial relations and personnel fields must undergo in order to keep face with unprecedented developments of



post-World II period are stated.

- 1-23. Wortman, Max S., "Personnel Ratios and Personnel Departments," Personnel Administration, 26(6), 1963, 46-51.

Discusses organization of the personnel function, personnel ratios and company size, personnel ratios and unionization.

- 1-24. Wortman, Max S., "Evaluation of the Personnel Function Through the Audit," Personnel Journal, 47(2), 1968, 115-118.

A study examining the personnel auditing practices of 36 manufacturing firms in the U.S.A. attempts to determine the use of the audit, the types of audits, the functions being audited and the reasons why some firms do not use the audit. The implications of auditing for the personnel manager are highlighted.

## 2. MANPOWER REQUIREMENTS

- 2A-1. Alfred, Theodore M., "Checkers or Choice in Manpower Management," Harvard Business Review, 41(1), 1967, 157-169.

This article stresses the need for important changes in staffing practices. The problems resulting from conventional staffing practices are described and a method is outlined for analyzing the organizations staffing system. Two contrasting systems, an "open" system and a "closed" system are described. A summary is given of the advantages of the "open" systems, the extent of their use and obstacles to be overcome.

The author draws on research conducted among managerial, professional and technical personnel in two industrial organizations.

The author's intent is to provide sufficient analysis and data to persuade the reader that these problems are important and that there is a practical approach to their solution.

- 2A-2. Haire, Mason, "Coming of Age in the Social Sciences," Industrial Management Review, 8(2), Spring, 1967, 109-118.

Presents a system theoretical approach to the management of human resources and to manpower planning. Puts two sets of variables in a matrix to see how they relate to each other.

1st set - recruitment, selection and classification, training, supervision, job assignment, performance, evaluation, pay, promotion.

2nd set- (the things that can happen to change the effectiveness of people in organizations).

- 1) new people come into organization
- 2) some people move out
- 3) some people move sideways (horizontal)
- 4) some people move up
- 5) some people change their behavior

- 2A-3. "Handling Your Work Fluctuation Crises," Administrative Management, Vol. 28, November, 1967, 38-40.

Six managers coping with computer conversion, employee turnover and customer service reorganizations report their solutions to work fluctuation problem.

- 2A-4. Jewett, R.F., "A Minimum Risk Manpower Scheduling Technique," Management Science, Vol. 13, June, 1967, B578-92.

A model is developed to determine optimum levels of fulltime employment for given scheduling period; manpower requirements (workloads) are examined, alternative manpower schedules are

described, cost factors are considered and method of scheduling employment is derived.

- 2A-5. Meeting Manpower Shortages: A Review of Reported Experiences Ithaca: Cornell University, New York State School of Industrial and Labor Relations, 1967.

Presents various ways business and industry have responded to shortages of skilled workers, especially in construction and manufacturing industries, includes changes in hiring policies and training policies.

- 2A-6. Muskie, E.S., "The State and Local Manpower Crisis," Personnel Administration, 29(6), 1966, 6-12.

How does the absence of sound personnel management contribute to current manpower difficulties? How can state and local resources be mobilized to meet future requirements? Discusses grant-in-aid programs, over-all personnel management, training and career development and salary schedules.

- 2A-7. Rosen, B., "The Personnel Director, Program Planning and Budgeting," Personnel Administration, 29(5), 1966, 3-5.

Describes 4 action categories for the implementation of PPBS (Program Planning and Budgeting Systems.)

- 1) identification of available people
- 2) development of varied career patterns and systems for hiring, training and assignment of people.
- 3) translation of agency plans and programs into manpower requirements at all organizational levels.
- 4) application of the principles of program planning and budgeting to the the personnel function.

Describes some of the broad program categories:

- 1) staffing (acquisition; placement)
- 2) development and performance of personnel
- 3) maintaining modern conditions of employment.

- 2A-8. American Management Association. Personnel Division. Fundamentals of Technical Manpower Planning. New York: American Management Association, Management Bulletin No. 78, 1966.

Describes how to determine the basis for manpower needs and how to meet future manpower needs (through recruiting, training, and coordination with overall planning).

- 2B-1. Baehr, M.E. and Williams, G.B., "Underlying Dimensions of Personal Background Data and Their Relationships to Occupational Classification," Journal of Applied Psychology, 51(6), 1967, 481-490.

In order to identify underlying dimensions of personal background data, 3 successive factor analyses were performed on the responses of a vocationally heterogeneous sample of 680 male Ss to a wide spectrum of commonly used personal-background-data items.

Using the final factoring, an analysis of variance of scores derived from 15 interpretable 1st-order factors across 10 occupational groups showed significant F ratios ( $P < .001$ ) for virtually all factors. A 2nd-order factor analysis yielded 5 uncorrelated factors, thought to represent broad behavior patterns associated with the needs and achievement of individuals. The study indicates relationships between the identified dimensions and occupational classification and provides a framework for future investigations of the dynamic relationships between biographical dimensions and occupational success.

- 2B-2. Britten, R.H., "Impacting - Our New Administrative Headache," Personnel Administration, 26(2), 1963, 51-55, 59.

Should job evaluation procedures recognize unique personal qualities? The author believes the rank-in-the-man concept is undermining objective classification approaches.

- 2B-3. Brown, Kenneth R., "Job Analysis by Multidimensional Scaling," Journal of Applied Psychology, 51(6), 1967, 469-475.

Multidimensional scaling methods were used to determine the dimensions of interpersonal relations in a specific job setting. Eighteen behavior statements relating to interpersonal relations in a management-analyst position in the Federal government were developed. Job incumbents judged the similarity of the statements. Data were collected and analyzed by both the traditional multidimensional scaling method and the A-technique. Results indicated the dimensions of interpersonal relations in the job. A comparison of the two different multidimensional approaches indicated that they produced similar results. In view of certain administrative advantages of the A-technique, further use of the A-technique in analyzing job domains seems justified.

- 2B-4. Carr, Malcolm J. and Silverman, J., "SAMOA - A Method for Determining Work Requirements," San Diego: U.S. Naval Personnel Research Activity, 1966.

(This method consists of three main steps:

- 1) development and administration of task lists
- 2) computerized analysis of the data on tasks and task patterns
- 3) setting up computerized procedures for stratifying and grouping clusters on the basis of technical, organizational and communicational variables. (T.O.C.))

The indices of these TOC variables form the basis for the cluster profiles which would constitute the primary input into a personnel classification structure.

- 2B-5. Davis, L.E., "The Design of Jobs," Journal of Industrial Relations, Vol. 9, July, 1967, 119-39.

A number of job design research studies are reported and results are reviewed. The author concludes that management must initiate changes in accepted organizational and job design practices, but many factors work to prevent application of design knowledge.

- 2B-6. Davis, L.E. and Valfer, E.S., "Intervening Responses to Changes in Supervisor Job Designs," Occupational Psychology, 39(3), 1965, 171-189.

This study sought to identify and evaluate some pertinent job design variables of first-line supervisory positions in order to specify the job contents of the positions and the structural relationships with other organizational units and levels. An underlying assumption of this research approach is that job performance may be enhanced by restructuring the socio-technical requirements of the job rather than by attempting to change the personality of the job holder.

- 2B-7. Fleishman, Edwin A., "Development of a Behavior Taxonomy for Describing Human Tasks: A Correlational-Experimental Approach," Journal of Applied Psychology, 51(1), 1967, 1-9.

The need for identifying a set of unifying dimensions underlying skilled behavior is discussed. The issues bear on problems of generalizing principles from laboratory to operational tasks and from one task to another. Combinations of experimental and correlational approaches appear to be required. The conceptual framework and research strategy utilized by the author in his research on perceptual-motor abilities is described and its relevance to taxonomy questions discussed. The integrative nature of the framework developed is illustrated by a wide variety of studies, in laboratory and operational situations ranging from those of skill learning and retention to the effects of environmental factors on human performance and in the standardization of laboratory tasks for performance assessment.

- 2B-8. Kuethe, James L. and Bernard Levenson, "Conceptions of Organizational Worth," The American Journal of Sociology, 70(3), 1964, 342-348.

Illustration of a technique for studying the perceived worth of a position by assigning relative salaries to eleven hypothetical organizational structures. A position's worth is found to increase with additional subordinates and if there is indirect rather than direct supervision of subordinates. Possible adaptations of the technique to future research are outlined.



- 2B-9. McCormick, E.J., Cunningham, J.W., Gordon, G.G., "Job Dimensions Based on Factorial Analyses of Worker-oriented Job Variables," Personnel Psychology, 20(4), 1967, 417-430.

The objective of this study was to explore the structure of jobs in terms of essentially worker-oriented variables. The basic job analysis instrument used in the study was the Worker Activity Profile. The rest of the article discusses the development and format of items, grouping of items, selection and analysis of sample jobs, factor analysis procedures, job dimensions, factor loadings.

- 2B-10. McCormick, E.J., Cunningham, J.W., Thornton, G.C., "The Prediction of Job Requirements by a Structured Job Analysis Procedure," Personnel Psychology, 20(4), 1967, 431-440.

Reports two studies relevant to the synthetic validity context that involved the use of the Worker Activity Profile. Both studies involved a procedure for deriving an "attribute score" for a given job for each of a number of human "attributes," these scores being built up from corresponding weights for the attributes as related to the 162 elements of the Worker Activity Profile.

Results of both studies support the notion that it may be possible to establish "bridges" between various job characteristics and their corresponding human-attribute requirements.

- 2B-11. McLennan, K., "The Manager and His Job Skills," Academy of Management Journal, Vol. 10, September, 1967, 234-45.

Survey of 530 managers indicates that managerial requirements are neither universal among all jobs nor unique to individual jobs, but are somewhere in middle range of universal-unique continuum. Also, an hypothesis that managers are transferable between jobs, organizations of industries due to universality or management "functions" (planning, directing, controlling, etc.) is not supported by results of study.

- 2B-12. McPherron, D.R., "The Newest Headache Solved," Personnel Administration, 27(3), 1964, 40-43.

The job evaluation system can be made more flexible with judicious use of the "impact-of-the-man" concept.

Def. — "the man-in-job" concept considers both the capabilities which the incumbent brings to the job and the extent to which the job situation requires him to use these capabilities and is simply a means of recognizing and evaluating the position which actually results from this combination.

Helpful guidelines to prevent abuses are provided by the author.

- 2B-13. Madden, J.M., Giorgia, J.J., "Identification of Job Requirement Factors by Use of Simulated Jobs," Personnel Psychology, 18(3), 1965, 321-31.

Air Force officer jobs are evaluated by rating a verbal job description on ten requirement factors. If these factors cover all the requirements, judging merited pay or grade for the job incumbent could be based on a simulated job description presenting only the numerical ratings on the ten factors.

To test this assumption, two groups of USAF majors ranked thirty real job descriptions and two groups ranked simulated descriptions in order to merited pay. Statistical analysis showed that error in predicting the rank-order criterion was significantly greater for rankings from simulated descriptions than from the verbal descriptions.

- 2B-14. Mann, K.O., "Characteristics of Job Evaluation Programs," Personnel Administration, 28(5), 1965, 45-47.

Sheds some light on the characteristics of currently existing job evaluation programs, e.g., how prevalent are they? How are they established? Who is in charge of them? How satisfied is management with them?

(A survey covering 40 organizations in the Toledo area)

- 2B-15. Morsh, J.E., "Job Analysis in the United States Air Force," Personnel Psychology, 17(1), 1964, 7-17.

In the search for a job analysis method that would have the greatest potentiality for the systematic collection, quantification and organization of information about Air Force jobs, the literature was reviewed and major government agencies who conduct job analyses were surveyed. In order to show the background from which the Air Force method was developed, brief descriptions and summary evaluations of some of the more important job analysis methods are presented.

- 2B-16. Patten, T.H. Jr., "Evaluating Managerial Positions by Evalograms," Personnel Administration, 29(6), 1966, 17-26.

Describes a new technique, "evalograms" for evaluating the job of a manager in large organizations. The evalograms provide a pictorial configuration of plant data which suggests groups of characteristics for consideration in objectively ranking the positions of managers of plants of various sizes, according to distinguishable criteria. The evalograms provide a means for ranking all the plants under the same rationale.

- 2B-17. Pelissier, R.F., "Successful Experience with Job Design," Personnel Administration, 28(2), 1965, 12-16.

Job enlargement and job purification can lead to increased efficiency as well as greater employee satisfaction. Illustrations from three Federal agencies are cited.

These techniques may be useful:

- 1) where highly specialized positions impede the recruitment or advancement of college graduates
- 2) in the selection of those best qualified for promotion.

- 2B-18. Prien, E.P., "Development of a Clerical Position Description Questionnaire," Personnel Psychology, 18(1), 1965, 91-98.

The author is concerned with the development of instruments, solely for the generation of a precise description of a type of occupational activity. This study was conducted to develop an instrument applicable across companies but limited to clearly defined job clusters. The specific objective was to develop an instrument which would provide a relatively precise description of clerical functions.

- 2B-19. Prien, E.P., "Development of a Supervisor Position Description Questionnaire," Journal and Applied Psychology, 47(1), 1963, 10-14.

A study of the job duties of factory foremen. A Supervisor Position Description Questionnaire (SPDQ) was developed and administered to 24 factory foremen and the corresponding supervising executive. An inverse interbattery factor analysis was performed. Seven factors were obtained and title. A second factor analysis of SPDQ scores yielded two factors. The factors are compared to the results of leadership studies.

- 2B-20. Ronan, W.W., "A Factor Analysis of Eleven Job Performance Measures," Personnel Psychology, 16(3), 1963, 255-67.

The purpose of this study was to establish possible criteria for use in the selection and evaluation of skilled trades apprentices and journeymen. It was assumed that a multiple criterion was desirable both in light of other studies and the complexity of skilled trades work. Eleven variables were evaluated: shop rating, school rating, mathematics grade, absence index, injury index, lost time accidents, grievances, disciplinary actions, promotions, supervisory ratings, personality disorder.

Intercorrelations of the eleven criterion variables are shown. Four distinct factors emerged from the eleven variables.

- 2B-21. Siegel, A.I. and Pfeiffer, M.G., "Factorial Congruence in Criterion Development," Personnel Psychology, 18(3), 1965, 267-79.

Supervisors' and subordinates' perceptions of the component factors of jobs must be congruent if misunderstandings and disharmony are to be avoided. The author demonstrates a method for establishing this perceptual homogeneity (or heterogeneity) between journeymen aviation electronics technicians and their supervisors.

There are important implications of this method for job analysis, training programs and selection studies.

- 2B-22. Stewart, Paul A., Job Enlargement, Iowa City, Iowa: Center for Labor and Management, College of Business Administration, University of Iowa, January 1967.

A Case study of Maytag's experience with job enlargement in blue-collar and managerial positions.

The report discusses the limitations and advantages of job enlargement at the shop level, in the office situation and at the managerial level.

- 2C-1. Anastasi, T.E., "Basics of Good Interviewing," Journal of College Place, Vol. 28, Oct. - Nov., 1967, 37-39.

Proceeding on the opinion that interviews are conversations with purpose, recruiters' reasons for conducting them are discussed. Methods for preparing and conducting interviews are explained.

- 2C-2. Barrett, G.V., Svetlik, B. and Prien, E.P., "Validity of the Job-Concept Interview in an Industrial Setting," Journal of Applied Psychology, 51(3), 1967, 233-235.

Interviews by psychologists were used to predict employee attitudes and job performance. Correlations were computed between the psychologist's predictions and employee ratings of their job attitudes and supervisor ratings of employee job performance. The psychologists were most accurate in predicting employee attitudes toward advancement and general morale. They were least accurate in predicting employee attitudes toward supervision and rewards. The psychologists were unable to predict employee performance as rated by the supervisors.

- 2C-3. Bray, Douglas W. and Campbell, R.J., "Selection of Salesmen by Means of an Assessment Center," Journal of Applied Psychology, 52(1), 1968, 34-41.

Newly hired candidates for sales positions were evaluated by means of an assessment center consisting of paper-and-pencil tests, an interview, and individual and group simulations. Assessment staff judgments were compared with job performance some months later as evaluated by a special observational team. Assessment results were strongly related to this criterion. Supervisors' and trainers' ratings were not significantly related to the job-performance criterion nor to assessment results. The findings lend support to recent studies indicating the efficacy of the assessment-center method in personnel selection.

- 2C-4. Campbell, R.J. and Bray, D.W., "Assessment Centers: An Aid in Management Selection," Personnel Administration, 30(2), 1967, 6-13.

Describes the assessment center method as a valuable technique for



the identification of management potential. The Bell System Assessment Center Program is described and the results achieved with this program.

- 2C-5. Carlson, Robert E., "Employment Decisions: Effect of Mode of Applicant Presentation on Some Outcome Measures," Personnel Psychology, 21(2), Summer 1968, 193-207.

The issue in this article concerns the practice in interview research of having the interviewer evaluate more than one applicant at a sitting.

One possible side effect of multiple applicant evaluations is that the interviewer may use a "person to person" comparison rather than a "person to criterion" comparison. The effect could be to distort the degree of reliability and ultimately the validity.

Purpose of study - to compare the effect of mode of applicant presentation (group vs individual) on outcomes such as degree of intra-rater consistency, stability of evaluations, inter-rater agreement, "leniency" of evaluation, and type of employment decision.

In addition the influence of different types of applicant information (e.g. appearance data vs written data, favourable vs unfavourable inform) on the interviewers' evaluations was investigated. Brief summary:

- for applicants constructed of written information, there is a consistent effect due to administering the applicants as a group. (The effect is greater consistency, stability, inter-rater agreement).

Emerging model from this research is that inter- and intra-rater agreement, and validity of interviewers' decisions are affected by the "type" of applicant sample, size of applicant sample, consistency and rate of interviewing experience and amount of information extracted from applicants.

Situational conditions set limits on the effectiveness of the interviewer.

- 2C-6. Carlson, Robert E., "Selection Interview Decisions: The Effect of Interviewer Experience, Relative Quota Situation and Applicant Sample on Interviewer Decisions," Personnel Psychology, 20(3), 1967, 259-280.

Approximately 125 life insurance agency managers composed this sample to investigate the effect of a situational condition and of selected individual variables on the number of applicants managers would want to hire. The results of the study are reported; in terms of:

- 1) the effect of relative quota position on number of contracts offered.
- 2) effect of relative quota position on degree of inter- and intra-interviewer agreement.
- 3) type of information and mean number of contracts offered.
- 4) effect of type of information on inter- and intra-rater agreement.



- 5) effect of applicant sample on inter- and intra-rater agreement.
- 6) effect of experience.
- 7) effect of type and length of experience on number of applicants favored.

- 2C-7. Carlson, Robert E., "Selection Interview Decisions: The Relative Influence of Appearance and Factual Written Information on an Interviewer's Final Rating," Journal of Applied Psychology, 51(6), 1967, 461-468.

The purpose of this study was to investigate the relative effect of appearance vs factual written data on an interviewer's final evaluation of an applicant for the job of life insurance agent. It was found that appearance data had little impact on the final rating.

- 2C-8. Carlson, R.E. and Mayfield, E.C., "Evaluating Interview and Employment Application Data," Personnel Psychology, 20(4), 1967, 441-460.

The purpose of this study was to attempt to determine the main effects and interactions of some of the variables which may influence an interviewer's final decision. In particular, the effect of three psychometric characteristics of items used in constructing hypothetical applicants — favorableness and inter- and intra-rater agreement and their interaction with the type of decision being made — a rating, a ranking, or a decision to hire or not to hire — was to be investigated.

- 2C-9. Downs, C.W., "What Does the Selection Interview Accomplish?" Personnel Administration, 31(3), 1968, 9-14.

A study designed to analyze what happens in actual interviews and to find out what impressions the interviewers and the interviewees have about the interviewing process.

- 1) a questionnaire was distributed to 76 professional college recruiters
- 2) a similar questionnaire was given to students at the graduate business schools at Northwestern and University of Chicago.
- 3) 40 interviews were taped for analysis.

Conclusion -- the degree of validity and reliability of the selection interview depends upon the skills of the individual interviewer.

- 2C-10. Featherstone, M.S. and Cunningham, Catherine M., "Age of Manual Workers in Relation to Conditions and Demands of Work," Occupational Psychology, 37(3), 1963, 197-208.

526 semi-skilled jobs were studied in 19 manufacturing firms, as part of a survey designed to identify factors militating for and against the employment of older men. A "comparison rating" technique was used to assess each job on ten variables, four of which were working conditions and the remaining six demands imposed by the job.

Generally speaking, the mean ages are higher in unfavorable working conditions. They are also higher when the demands for "fineness," "sustained concentration" and "pacing" are low. The reverse is true of "responsibility." Age increases with "physical effort" up to a medium degree of heaviness and then falls where this demand is severe.

- 2C-11. Gardner, J., "Handwriting Analysis Finds Growing Favor in Personnel Offices," Wall Street Journal, 170:1+, September 11, 1967.

There are many who doubt ability of graphologists to provide accurate, meaningful insight into individual's personality but growing numbers of corporate clients seem convinced that they can perform valuable services. However, companies that use handwriting analyses in selecting employees rarely rely entirely on graphologist's judgment.

- 2C-12. "Group Selection Put to the Test," Personnel Management, Vol. 49, September 1967, 128.

National Institute of Industrial Psychology has noted renewed interest of British companies in use of group assessment techniques as selection aids.

- 2C-13. Goldenberg, S.J., "Significant Difference: A Method of Job Evaluation," Canadian Personnel and Industrial Relations Journal, 15(3), May 1968, 19-23.

Significant Difference (essentially a single factor ranking method) focuses on the major distinction between any two jobs. Details of the method and how to implement it are discussed. The method does not establish a rate of pay, but a level for pay purposes.

- 2C-14. Grusky, Oscar, "Career Mobility and Organizational Commitment," Administrative Science Quarterly, March, 1966, 488-503.

This study examines the relationship between career mobility and strength of commitment among managers of a large corporation. Two hypotheses were advanced:

- 1) there is a monotonic relationship between rewards received and the manager's degree of commitment.
- 2) the greater the obstacles the individual has to overcome in order to obtain the organization's rewards, the stronger would be his commitment.

Hypothesis I - slight and scattered confirmation

Hypothesis II - uniformly supported.

- 2C-15. Hodgson, R.W., "Personality Appraisal of Technical and Professional Applicants," Personnel Psychology, 17(2), 1964, 167-87.

A group of over 500 applicants were appraised for technical and professional positions in industry. The employment appraisal included

tests of ability, aptitude and personality and significant relationships were found between the test results and the employment decisions.

Applicants for sales positions differed considerably from applicants for research or engineering positions in that the sales applicants were typically more ascendent and socially extraverted. The personality inventories clearly identified those sales applicants who were most likely to receive offers of employment, but for non-sales applicants the intellectual characteristics received far more consideration.

The reliability and objectivity of a pattern analysis or configural scoring system for personality inventories was demonstrated.

- 2C-16. Hollenbeck, G.P. and McNamara, W.J., "CUCPAT and Programming Aptitude," Personnel Psychology, 18(1), 1965, 101-105.

The problem was to determine the value of a new computer-based programmer selection tool, the Computer Usage Company programmer Aptitude Test (CUCPAT) relative to traditional tests of programmer aptitude.

The disadvantages of CUCPAT are discussed. The data do not indicate the CUCPAT is superior to other selection instruments.

- 2C-17. Kirk, D., "How to Evaluate and Select Personnel for Management," Canadian Personnel and Industrial Relations Journal, 13(3), 1968, 29-34.

Attempts to describe some of the basic instruments and approaches useful in the appraisal and selection of management personnel. Discusses the interview, impression summaries, checking references, etc.

- 2C-18. Kirkpatrick, Donald L., "How to Select Foreman," Personnel Journal, 47(4), 1968, 262-270.

Describes the steps in selecting a foreman, such as determining the number of foreman openings to occur within one year, preparing job descriptions and the number of candidates to be selected. Completed application blanks by the candidates matched against criteria for the job.

Lists of applicable tests are given in addition to a typical performance appraisal form and application blanks.

- 2C-19. Lowe-Holmes, A.R. and Brocklesby, I., "A Factor-Analytic Study of Selection, Decision-making," Occupational Psychology, 42(2), 1968, 85-88.

Provides quantitative data on the selection procedure of management trainees in a british retail organization. Interview records of 51 successful and 51 unsuccessful candidates were factor analyzed. It was found the decision was based mainly on one factor and superficial characteristics and emphasized rejection rather than acceptance.

- 2C-20. Mass, J.B., "Patterned Scale Expectation Interview: Reliability Studies on a New Technique," Journal of Applied Psychology, 49(6), 1965, 431-433.

A proposed interview procedure has ratings based on scaled examples of on-the-job behavior. Traits necessary were determined and examples were written of behaviors related to these traits. Examples were checked for agreement as to trait category and scaled as to degree of the trait exhibited. Interviewers rated each candidate by making analogies from the candidate's responses to job behavior that might be expected of the candidate. Interviews using three raters to judge one candidate simultaneously and using two different interviewers to judge the same candidate one at a time, indicate the technique's high reliability. Interrater reliability was significantly higher ( $p < .01$ ) using the scaled expectation rating method than when using a traditional adjective rating scale.

- 2C-21. Mahoney, Thomas A and England, G.W., "Efficiency and Accuracy of Employee Selection Decision Rules," Personnel Psychology, 18(4), 1965, 361-77.

The authors discuss the development and use of decision rules for employee selection within the following framework:

- 1) N candidates for employment must be selected over a specified period
- 2) a criterion of employee effectiveness is available (i.e., "success and failure" employees)
- 3) they are considering the application of a single predictor in employee selection.

Given the optimal decision rule, does the expected benefit of application of the decision rule outweigh the expected cost.

The rest of the article discusses traditional approaches to employee selection and a "cost" model for employee selection.

- 2C-22. Maier, N.R.F., "Sensitivity to Attempts at Deception in an Interview Situation," Personnel Psychology, 19(1), 1966, 55-66.

A role-playing format was used to test the ability of an interviewer to distinguish between honest and dishonest interviewees. The purpose of this experiment was to determine whether persons in an interview situation can recognize attempts to deceive and how the trust and distrust affects their actions in a decision.

- 2C-23. Mayfield, E.C. and Carlson, R.E., "Selection Interview Decisions: First Results from a Long-term Research Project," Personnel Psychology, 19(1), 1966, 41-53.

Recent reviews of the literature have pointed out the need for additional knowledge of the decision-making process as it occurs in the



selection interview. The present paper reports the first results from a long-term project designed to investigate this process in a life insurance context. These results provided valuable information on which additional work could be based. The research presently being undertaken is briefly described and discussed.

- 2C-24. Mayfield, E.C., "The Selection Interview: A Re-evaluation of Published Research," Personnel Psychology, 17(3), 1964, 239-260.

The selection interview is criticized for its lack of reliability and validity. The present paper attempts to take three further steps:

- 1) Present limited knowledge is explained in terms of
  - a) a lack of comparability between studies
  - b) an overdependence on research results from other areas.
- 2) there are numerous research findings which have received support from more than one study. These findings are summarized and discussed.
- 3) a starting point for basic research on the selection interview which may lead to more profitable research is presented.

- 2C-25. Myers, A.S. Jr., "Recruiting and Selecting Foreign National Personnel for Overseas Operations," Personnel Administration, 28(4), 1965, 25-30.

Points out some of the differences, difficulties, methods, and problems which may arise in a foreign national recruitment and selection program of a U.S. firm starting overseas operations.

- 2C-26. Nash, A.N., "Development of an SVIB Key for Selecting Managers," Journal of Applied Psychology, 50(3), 1966, 250-254.

SVIB items related to a global managerial effectiveness criterion were identified and cross-validated on 461 managers from 13 varied Minnesota-based companies. A unit-weighted key composed of 57 items correlated .33 with the criterion on a hold out sample. Items which held up well in both the development and cross-validation groups are interpreted and distinctions between interest patterns of "more" and "less effective" managers are discussed.

- 2C-27. Nelson, H.S., "AID Evaluates Executive Skills," Public Personnel Review, Vol. 28, October 1967, 228-230.

Agency for International Development, an organization in State Department, modifies its personnel evaluation procedures. Explanations of sample, compilation of data and findings of study made to determine new evaluative approach are given.

- 2C-28. Newberry, L.A. and Bootzin, R.R., "Predictive Validity of the Interview," Journal of Applied Psychology, 50(1), 1966, 67-72.

This paper describes the use of the interview technique as a valid and



reliable instrument for predicting job placement and vocational success. The interviews of 144 blind adults were objectively and quantitatively scored, making full use of all responses elicited by the S. The results indicated that job success and vocational placement are significantly related to a number of variables tapped by the interview, such as perception of blindness, learned ways of dealing with tension, interpersonal interaction and employment potential.

- 2C-29. Nix, Margaret E., "The Man in Manager," Personnel Administration, 31(4), 1968, 45-48.

Describes a new approach, "self-assessment," in the recruitment of executive personnel. Participative choosing by the potential manager decreases the risk of putting responsibility in the wrong hands. Six criteria are advanced to measure self: autonomy, environmental mastery, perception of reality, self-acceptance, self-actualization and integration.

- 2C-30. Norman, W.T., "Personality Measurement, Faking, and Detection: An Assessment Method for Use in Personnel Selection," Journal of Applied Psychology, 47(4), 1963, 225-41.

Usual methods for personality assessment have been found unsuitable for use in personnel selection contexts. An alternative method of item construction and of scoring key and detection scale development for personality inventories is proposed. Results of a double cross-validation study based on 456 male salesmen using three newly developed forced-choice inventories indicate that:

- a) over 90% of the test performances can be correctly identified as self-report or faked
- b) mean score profiles under the two conditions for the five personality variables under study are virtually congruent and variances under the faking condition are uniformly smaller.
- c) validities against peer-nomination criteria are in the moderate range for all five variables
- d) Kuder-Richardson Formula 20 reliabilities between .83 and .92 were obtained.

- 2C-31. Pallett, James E. and Hoyt, D.P., "An Empirical Approach to Criterion Specification in General Business," Journal of Applied Psychology, 51(2), 1967, 174-180.

The investigation sought to discover specific behavioral characteristics related to judgments of success in general business activities. 13 to 25 characteristics which were rated by supervisors were sufficient to account for the entire set of variances and covariances. Implications were drawn for job recruitment, selection, guidance and training.

- 2C-32. Rose, Bertram M., "The Man That Got Away," Personnel Administration, 25(1), 1962, 33-39.

Evaluation of recruitment programs tends to secure feedback from those who were hired. Reported here is a unique attitude survey of those who declined jobs.

- 2C-33. Ross, P.F. and Dunfield, N.M., "Selecting Salesmen for an Oil Company," (Imperial Oil Ltd.), Personnel Psychology, 71(1), 1964, 75-84.

The problem in the Company was to select from among applicants for sales jobs those who would be most successful in sales work. To construct a successful sales selection test battery, three criteria of job performance of salesmen were used:

- 1) job performance ranking
- 2) ranking on potential
- 3) job performance rating

The sample and 19 predictors are discussed correlations between the criteria and the predictors and the control variables are presented in tables.

- 2C-34. Rowe, P.M., "Individual Differences in Selection Decisions," Journal of Applied Psychology, 47(5), 1963, 304-307.

The cognitive variable "category width" was examined for its applicability to the problem of individual differences in selection decisions. Accept or reject decisions for 100 "applicant" descriptions were made by 146 salesmen. Analysis of the decisions showed striking between individual differences and within individual consistencies in the number of applicants accepted. Differences in the width of the category "acceptable applicants" were found to be related to past learning and present motivational state. Evidence that category width is a general trait was also found. It was concluded that much decision variance can be accounted for in terms of the category width of the interviewer.

- 2C-35. Ruzesky, N., "The Application Form -- A Multi-purpose Personnel Tool," Canadian Personnel and Industrial Relations Journal, 13(1), January 1966, 29-34.

The article stresses that the application blank must be designed for a specific function(s) in the firm. Discusses the unstructured and weighted application forms and their advantages and disadvantages.

- 2C-36. Scott, Richard D. and Johnson, R.W., "Use of the Weighted Application Blank in Selecting Unskilled Employees," Journal of Applied Psychology, 51(5), 1967, 393-395.

The effectiveness of the weighted application blank (WAB) in differentiating between long-term and short-term unskilled employees

was evaluated. WAB scores correlated .45 with job tenure for salesmen in the holdout group. Females who lived close to the plant and workers with a fair amount of family responsibility were more likely to become long-term employees.

- 2C-37. Spitzer, M.E. and McNamara, W.J., "A Managerial Selection Study," Personnel Psychology, 17(1), 1964, 19-40.

A study was conducted in a manufacturing division of an electronics firm to determine if tests could be selected which would be positively related to managerial success and thus useful in selecting employees who have good managerial potential. Data were obtained from 102 managers (84 first line supervisors). A job analysis by interviews was carried out to find the characteristics that were basic requirements for managers and which discriminated between good and poor managers. Tests were used to measure the characteristics which seemed to relate to the success of the managers interviewed. The objective criterion (salary corrected for length of service) employed to evaluate the test results was found to be the most satisfactory measured. When the tests were correlated to the objective criterion for the first-line managers, two measures (Otis Test of Mental Ability and Background and Contemporary Data Form) were found to have significant validity and cross-validity. Use of these instruments in selection might increase the numbers of high performing managers.

- 2C-38. Thompson, D.W., "Some Criteria for Selecting Managers," Personnel Administration, 31(1), 1968, 32-37.

Encourages the use of well-defined criteria in selecting managers.

The author's concept of the ideal manager:

- 1) he is "other-directed"
- 2) "adjusts behaviour to people's needs"
- 3) he is committed to doing a job in a conscientious manner
- 4) he respects people
- 5) he meshes objectives and rewards for his subordinates and tries to maximize the possibility of obtaining rewards for his subordinates
- 6) recognizes and adjusts to environmental changes.

### 3. PERFORMANCE EVALUATION

- 3-1. Baehr, Melany E. and Williams, G.B., "Prediction of Sales Success from Factorially Determined Dimensions of Personal Background Data," Journal of Applied Psychology, 52(2), 1968, 90-103.

A concurrent validity study was made of the scores of 210 salesmen and 16 district managers on 15 personal background dimensions, identified previously by factor analysis. Differences between factor-score means for the manager and sales groups and for the upper-and lower-rates sales groups were significant for the factors Financial Responsibility, Early Family Responsibility and Stability. Multiple-regression analyses were made of the factor scores against, 5 criterion measures of on-the-job behaviour. Interpretation of the highest-weighted factors in these analyses indicates the logical, dynamic relationships between personal background and job behaviour.

- 3-2. Barrett, R.S., "The Influence of the Supervisor's Requirements on Ratings," Personnel Psychology, 19(4), 1966, 375-387.

The purpose of this research was to increase understanding of the rating process by studying perceptions held by supervisors and incumbents regarding how they think the work should be done and how they believe it is actually done.

The general thesis of this research proposes that a good part of ratings is explainable in terms of perceptions of "performance style."

- 3-3. Berry, N.H., Nelson, P.D., McNally, M.S., "A Note on Supervisor Ratings," Personnel Psychology, 19(4), 1966, 423-26.

The present study, conducted in a military setting reveals the amount of agreement between performance ratings given at different times by supervisors of similar and dissimilar rank levels.

- 3-4. Booker, G.S. and Miller, R.W., "A Closer Look at Peer Ratings," Personnel, 43(1), 1966, 42-47.

Discusses the merits of Peer Ratings in promotional decisions. Describes the successes that the armed forces have had using co-worker evaluations in the selection of key personnel. Findings from the army studies point out to three main conclusions re peer rating:

- 1) peer group nominations are usually consistent
- 2) the reliability of peer nominations appears to be a function of the relative importance of the position within the organization.
- 3) high correlation between peer and superior nominations indicates that peers are as objective as superiors in selecting an individual for promotion.

- 3-5. Boyd, J.B., "Hidden Factors in Employee Turnover-implications Regarding Manpower Composition," Personnel Administration, 26(6), 1963, 4-10.

Employee interests, which vary among occupations as well as organizations, influence turnover. Corrective action and implications for creativity are discussed.

- 3-6. Brenner, Marshall H., "Use of High School Data to Predict Work Performance," Journal of Applied Psychology, 52(1), 1968, 29-30.

For a sample of high school graduates employed in an aircraft plant, teachers' work habits and cooperation ratings, absenteeism and grade-point data were obtained from high school transcripts and related to work-performance criteria of supervisory ratings, absenteeism and tardiness records. Significant relationships were obtained between the high school predictors and the work-performance criteria.

- 3-7. Brown, D.R. and Lister, T.A., "Industrial Accident Repeaters: Some New Research Results," Canadian Personnel and Industrial Relations Journal, 15(1), 1968, 39-43.

Individual differences do occur among accident repeaters. Parameters for identifying these persons can be established for any plant from their own records. Development of a program to be implemented by the regular supervisors of such employees may have significant benefits.

- 3-8. Bryan, J.F. and Locke, E.A., "Goal Setting as a Means of Increasing Motivation," Journal of Applied Psychology, 51(3), 1967, 274-277.

On the basis of differences in performance in relation to maximal ability and differences in attitude ratings on an addition task, a low-motivation and a high-motivation group were selected for two retests on the same task. The low-motivation group was given specific goals to reach and the high-motivation group was told to do their best on each trial of each retest. By the end of the second retest, the group given specific goals had "caught" the Do-Best group both in terms of performance and in terms of favorable attitudes toward the task. The results suggested that specific goals can be used to motivate salesmen who bring a low degree of motivation to the task situation.

- 3-9. Buel, W.D., "Biographical Data and Identification of Creative Research Personnel," Journal of Applied Psychology, 49(5), 1965, 318-21.

Biographical data items were weighted and cross-validated for the identification of creative research personnel. Significant linear, partial linear, multiple and multiple-partial correlations are presented between no previous experience (NPE) and previous experience (PE) keys and a variety of creativity criteria. A behavioural and perceptual image of the creative scientist is presented, together with a discussion of the



communality inherent in various criteria of creativity.

- 3-10. Buel, W.D., Albright, L.E., and Glennon, J.R., "A Note on the Generality and Cross-Validity of Personal History for Identifying Creative Research Scientists," Journal of Applied Psychology, 50(3), 1966, 217-219.

A 33-item scoring key composed of personal history items originally validated for research personnel in a petroleum laboratory was applied to research personnel in a pharmaceutical laboratory. Significant validities were obtained, in the new setting between personal history scores and several criteria of research productivity and creativity. These results were interpreted to suggest that empirical keys may have more generality than is commonly believed.

- 3-11. Coop, Robert, et al., Strengthening Employee Performance Evaluation, Chicago: Public Personnel Association, 1966, pp. 46.

Originally presented at a seminar dealing with employee performance evaluation in the public service.

- 3-12. Cummin, Pearson C., "TAT Correlates of Executive Performance," Journal of Applied Psychology, 51(1), 1967, 78-81.

The TAT was used to measure n Achievement, n Affiliation, n Power, n Autonomy, n Aggression and n Deference in groups of successful and less successful executives.

The successful group had significantly higher scores in n Achievement and n power than the unsuccessful ones. The findings suggest that the analysis of motives by means of the TAT has promise for executive selection. However, at this stage, the practical use of this technique is limited.

- 3-13. Daniels, J. and Comiskey, R.J., "The Unproductive Employee - Cause, Effect and Remedy," Personnel Administration, 27(2), 1964, 30-35.

Discusses various causes of unproductivity, the impact of the unproductive employee, and different approaches to remedying this problem.

- 3-14. David, J.W. Jr., "Work Involvement of Executives," Personnel Administration, 29(2), 1966, 6-12.

What factors influence work involvement? This paper reports data on attitudes toward work expressed by a population of federal executives and examines the relationships between different indicators of work involvement. Models of executives strongly involved and those only weakly involved are suggested.

- 3-15. Dunnette, M.D., "A note on the Criterion," Journal of Applied Psychology, 47(4), 1963, 251-54.

The concept of the criterion in much applied research has implied the possibility of identifying a single, ultimate measure against which predictors should be correlated. It is argued that the criterion has been overemphasized with the result that complexities of predicting the many facets of job success have been ignored in favor of overly simplified studies designed to relate predictors to single measures of job success. Applied psychologists should give more emphasis to construct validation and make an effort to learn more about the meaning of test scores and other predictors in terms of multiple dimensions of behaviour. Information available on the Engineering Research Key of the Strong Vocational Interest Blank is presented in order to illustrate the pattern of validation research recommended.

- 3-16. Forehand, G.A., "Assessments of Innovative Behaviour: Partial Criteria for the Assessment of Executive Performance," Journal of Applied Psychology, 47(4), 1963, 206-13.

Assessments by superiors and peers of the innovative behaviour of administrators are considered as partial criteria of executive performance. A measure based upon forced choice between innovative and noninnovative descriptions shows promise: its major correlates both within and across raters are other measures of unnovation and of attributes theoretically related to unnovativeness; and it is significantly correlated with general effectiveness ratings only when assessors report, by an independent measure, that they value unnovative behavior highly. Assessments are influenced by status of assessor (supervisor or peer) and by organizational climates.

- 3-17. Frederiksen, Norman, "Response Set Scores as Predictors of Performance," Personnel Psychology, 18(3), 1965, 225-244.

A Work Preference Schedule (WPS) was administered to federal government employees in connection with routine personnel procedures. Statistical study of the scores showed that response sets could be reliably measured and that attractive and unattractive items should be studied separately.

Correlations of set scores were found between the WPS and the Bureau of Business In Basket Test.

- 3-18. Ghiselli, E.F., "Maturity of Self-perception in Relation to Managerial Success," Personnel Psychology, 17(1), 1964, 41-48.

Using a forced-choice adjective checklist, a scale measuring maturity of self-perception was developed. Contrary to expectation, a positive relationship between maturity and success in managerial positions was not found. Rather those individuals whose self-perceptions were like those of their own age were most likely to be successful managers and to achieve higher management positions.

- 3-19. Glickman, A.S., "Is Performance Appraisal Practical?" Personnel Administration, 27(5), 1964, 28-32.

Discusses such problems as what constitutes a practical performance appraisal system, the information gathering process and how to approach realization of the objectives of such of a system.

- 3-20. Grant, D.L. and Katkovsky, W., "Contributions of Projective Techniques to Assessment of Management Potentials," Journal of Applied Psychology, 51(3), 1967, 226-232.

The contributions of projective techniques to assessment -- center staff evaluations and the relationships of projective variables to progress in management are presented. The projective data were obtained by coding reports written by a clinical psychologist from 3 projective instruments. Analyses of the data show that the projective reports particularly influenced the assessment staff in rating such characteristics as work motivation, passivity and dependency. In addition, several of the projective variables are reliably related to progress in management, especially those pertaining to leadership and achievement motivation. In brief, the findings clearly indicate that relevant information on managerial motivation was obtained from the projective reports.

- 3-21. Gruenfeld, L.W. and Weissenberg, P., "Supervisory Characteristics and Attitudes Toward Performance Appraisals," Personnel Psychology, 19(2), 1966, 143-150.

It was the purpose of this study to investigate the attitudes of civil service supervisors toward their performance appraisal system. Variables which have in previous investigations been related to supervisory effectiveness correlated consistently with the supervisors' Attitude toward the Appraisal System. The findings of this study suggest strongly that supervisors who are relatively high in Supervisory Quality, Initiative, Self-Assurance, Consideration, Structure and Interpersonal Trust are more favorably inclined toward the development of their subordinates than those supervisors who are relatively low in these characteristics.

- 3-22. Hanson, P.G., Morton, R.B. and Rothaus, P., "The Fate of Role Stereotypes in Two Performance Appraisal Situations," Personnel Psychology, 16(3), 1963, 269-280.

The present study investigated the effect and course of stereotyped attitudes of supervisors and subordinates interacting to planned changes in the subordinates' performance. In particular, the study concerned the fate of these stereotyped role-attitudes during the course of two types of appraisal interviews: the traditional traits rating method and the newly-formulated goals method.

- 3-23. Hobert, Robert, and Dunnette, Marvin D., "Development of Moderator Variables to Enhance the Prediction of Managerial Effectiveness," Journal of Applied Psychology, 51(1), 1967, 50-64.
- Item analyses were used to develop 2 moderator variables, which, on cross-validation, successfully identified managers who were over- and underpredicted by regression equations developed earlier.
- The results obtained provide further evidence of the usefulness of moderator variables for enhancing the magnitude of relationships in test validation and selection research.
- 3-24. Huse, Edgar F., "Performance Appraisal -- A New Look." In Personnel Administration, 30(2), 1967, 3-5, 16-18.
- Can performance appraisal increase productivity? Can multi-purpose systems serve all the purposes for which they are designed? Research reported here shows that a traditional, formal, multi-purpose system designed to accomplish three different and conflicting objectives was not able to do so. Establishing different techniques to attain each of the three different objectives showed significant and startling research results in the area of work improvement and good acceptance of the approaches to the objectives of salary action and documentation.
- 3-25. Jackson, J.D., "Measuring Training for Effectiveness," Canadian Personnel and Industrial Relations Journal, 15(1), 1968, 46-48.
- It is possible to improve employee working skills and measure the extent to which the course succeeds in achieving these goals. Evaluative research should be performed:
- 1) during the exploratory stage before a course plan is developed
  - 2) to test the components of the training procedures before they are applied
  - 3) to assess the amount of learning which takes place and is retained.
- 3-26. Kay, E., Meyer, H.H., French, J.R.P., Jr., "Effects of Threat in a Performance Appraisal Interview," Journal of Applied Psychology, 49(5), 1965, 311-17.
- Real-life appraisal interviews conducted by 92 manager-subordinate pairs were studied intensively. Reactions of subordinates were systematically obtained before and after their appraisal interviews and the proceedings in the actual interviews were carefully documented by trained observers. Measures of subsequent performance improvement realized as a result of the appraisal interviews were taken 12 weeks later.
- Results: The greater the threat, the less favorable the employees' attitudes toward the appraisal system and the less the subsequent constructive improvement in job performance realized.



Some practical implications for appraisal practices are cited.

- 3-27. Kirchner, W.K., and Mousely, Nancy B., "A Note on Job Performance: Differences Between Respondent and Nonrespondent Salesmen to an Attitude Survey," Journal of Applied Psychology, 47(3), 1963, 223-224.

Salesmen respondents (N = 72) and nonrespondents (N = 19) to a mail attitude questionnaire were compared in terms of 2 objective measures of performance: net sales points and net total points. Mean scores on both measures were significantly higher for respondents than for nonrespondents. These results tended to follow results of other studies in nonindustrial settings that suggested volunteers or respondents are, in general, "better" persons in terms of such variables as motivation, personality and, in this case, job performance.

- 3-28. Lamouria, L.H., and Harrel, T.W., "An Approach to an Objective Criterion for Research Managers," Journal of Applied Psychology, 47(6), 1963, 353-57.

Traditional clinical rating practices for evaluating research-manager performance are mainly subjective and fail to objectively quantify performance. This research shows that quantification is possible using operation research techniques for group-centered evaluation. The technique was tested by evaluating manager performance in 4 dissimilar departments averaging 19 professional men in each. An upper-management executive supplied comparative clinical ratings. A mathematical model provided a framework permitting objective study of each department's contribution in relation to company goals. The technique has exceptional analytical qualities and permits convenient quantification of research-manager performance. The results suggest that the validity of the clinical, subjective approach to management evaluation should be questioned.

- 3-29. Lauder milk, K.M., "Prediction of Efficiency of Lumber and Paper Mill Employees," Personnel Psychology, 19(3), 1966, 301-310.

Male applicants (N = 438) for employment in a combined lumber and paper mill were administered a battery of 5 physical fitness, six aptitude and one personality tests. Several employees were followed up for more than six years. The test results, combined with ten personal items from an application record, were related to four general criteria of job performance.

- 3-30. Lawler, E.E. III, "Attitude Surveys and Job Performance," Personnel Administration, 30(5), 1967, 3-5, 22-24.

Do attitude surveys measure attitudes that relate to job performance? This article argues that the addition of "path-goal" attitude measures to the typical company attitude survey can provide



an important and often missing link. The link between attitude data and the degree to which the employees are motivated to perform their job effectively.

- 3-31. Lawrie, J.W., "Convergent Job Expectations and Ratings of Industrial Foremen," Journal of Applied Psychology, 50(2), 1966, 97-101.

This study hypothesized a significant positive correlation between evaluations of foremen made by superiors and subordinates and the degree to which foremen share and accurately predict superior-subordinate expectations regarding the foreman's job behavior. The S<sub>s</sub>, (8 superiors, 32 foremen and 377 subordinates) responded to a questionnaire composed of "consideration" and "structure" items yielding "expectation-convergence scores" which were correlated with evaluation measures. In a department providing close face-to-face interaction, a significant proportion of the variance in superior evaluations was accounted for by the hypothesis of expectation convergence. Various implications of these data for common personnel practices are discussed.

- 3-32. Ley, R., "Labor Turnover as a Function of Worker Differences, Work Environment and Authoritarianism of Foremen," Journal of Applied Psychology, 50(6), 1966, 497-500.

The labor turnover of male production workers of a manufacturing company was studied with respect to biographical data, work environment and authoritarianism of foremen. Workers who terminated their employment within 1 year were younger, had more jobs in the 2 years preceding their employment with the company and had higher hourly wages on their last job. The major factor found to be related to labor turnover was the degree of authoritarianism of the 12 foremen, i.e., turnover rate correlated .76 with authoritarianism ratings of the foremen.

- 3-33. Locke, E.A., "The Relationship of Intentions to Level of Performance," Journal of Applied Psychology, 50(1), 1966, 60-66.

Three laboratory experiments are reported which stem from Ryan's approach to motivation. The fundamental unit is the "intention". The experiments examined the relationship between intended level of achievement and actual level of performance. A significant linear relationship was obtained in all three experiments: the higher the level of intention, the higher the level of performance. The findings held both between and within S<sub>s</sub> and across different tasks. The implications for the explanation of behavior are discussed.

- 3-34. McDermid, C.D., "Some Correlates of Creativity in Engineering Personnel," Journal of Applied Psychology, 49(1), 1965, 14-19.

This study tested recently developed criteria and predictors of scientific creativity in an industrial setting (an applied engineering division). The most significant correlations were obtained between the criteria and the ACL (Gough's Adjective Check List) and the BIRST (Biographical Information (form) for Research and Scientific Talent.)

These results confirm other research findings which suggest that self-reports and biographical data, especially those which describe interests or achievements of a creative nature, are currently the most effective predictors of creative performance in real-life situations.

- 3-35. MacKinnon, D.W., "The Identification and Development of Creative Personnel," Personnel Administration, 31(1), 1968, 8-17.

Sheds light upon the problem of identifying and developing creativity. Presents a few of the more salient characteristics of some creative groups studied; suggesting ways in which creativity might be nurtured through the creation of appropriate social and intellectual climates and conditions of work.

- 3-36. Mahoney, T.A., et al., "Identification and Prediction of Managerial Effectiveness," Personnel Administration, 26(4), 1963, 12-22.

Personal characteristics which can differentiate more effective from less effective managers are identified. The predictors seem valid regardless of job assignment or type of company. Better managerial selection is thus possible.

- 3-37. Paul, Robert J., "Employee Performance Appraisal: Some Empirical Findings," Personnel Journal, 47(1), 1968, 109-114.

The company must continually evaluate employees' progress through informal progress appraisals along with scientifically designed tests and statistically determined correlation between test scores and success on the job. A study is described in which three groups of sales people were rated by supervisors on various work related skills and personal factors. These ratings and an overall performance measure for each employee were analyzed by use of simple and partial correlation analysis and multiple regression analysis in order to estimate the degree to which the independent variables were associated with sales volume.

The analysis showed no relationship between the measures of job success and the various point ratings.

Tests must be carefully written to measure elements of success on the job and raters must be well trained.

- 3-38. Rogers, E.J., "The Experience Index: Tool for Measuring Turnover Effect," Personnel Journal, 46(9), 1967, 596.

The Application of the concept of an Experience Index, which is new tool for measuring turnover effect, is explained. The concept is

based on a generalization that increased length of service will normally yield more productive performance.

- 3-39. Ross, P.F., "Reference groups in man-to-man Job Performance Rating," Personnel Psychology, 19(2), 1966, 115-42.

A method for getting comparable ratings of job performance from different raters working in several departments was studied. A rating procedure was tried requiring the rater to nominate out-of-department people whose job performance he knew well. A subordinate was ranked on overall job performance within the out-of-department reference group. An index was computed from these man-to-man comparison data. The index was compared with ratings from an anchored rating scale for their validity in guiding salary decisions in a research and development organization. The man-to-man comparison procedure was found to be as valid as the anchored ratings. Nevertheless, the two methods diverged in important practical ways in the results they produced. A conceptual framework for the man-to-man comparison method and studies to further define and improve the method are discussed.

- 3-40. Rothaus, P., Horton, R.B. and Hanson, P.G., "Performance Appraisal and Psychological Distances," Journal of Applied Psychology, 49(1), 1965, 48-54.

This experimental study investigated the rating attitudes of supervisors and subordinates and their reactions during public- and private-performance evaluations. The differences between the two groups under the two conditions are discussed. The concepts of psychological distance and role stereotypes are used in explaining the results.

- 3-41. Scanlan, B.K., "Increasing Supervisory Effectiveness through Personnel Management," Personnel Administration, 27(5), 1964, 24-27.

Supervisors can increase their production by collection and use of the following data:

- (1) hiring data cards
- (2) attendance and tardiness records
- (3) individual production records
- (4) individual personnel folders on each employee

- 3-42. Schirmer, G.A., "Restless Employees," Wall Street Journal, 170:1+, September 18, 1967.

Turnover of college graduates, which poses mounting problem to many companies, is abetted by stepped-up efforts to hire established personnel, new relocation services operated by college placement offices. By working out salary formulas, making jobs more challenging,

companies hope to keep promising men satisfied.

- 3-43. Schuh, A.J., "Application Blank Items and Intelligence as Predictors of Turnover," Personnel Psychology, 20(1), 1967, 59-63.

The problem was to ascertain the feasibility of using the biographical data items that appear on a company's application form and the Wonderlic Personnel Test to identify long and short tenure salesmen. Using 30 personal history variables and the Wonderlic Personnel Test as predictors, the application forms were examined and scored. None of the items, aside from reported church attendance, appeared to be related to long tenure other than through sampling error.

- 3-44. Schuh, A.J., "The Predictability of Employee Tenure: A Review of the Literature," Personnel Psychology, 20(2), 1967, 133-152.

Presents a summary of the literature to guide researchers in developing a testing program for validation against a tenure criterion. Discusses the relationship of intelligence tests, aptitude tests, interest inventories, personality tests, biographical data, and job satisfaction inventories to tenure.

- 3-45. Schultz, R.S., "How to Appraise People," Supervision, Vol.29, November, 1967, 5-7+.

A series of outlines and guideposts lists native human characteristics which are helpful in understanding and observing people.

- 3-46. Shott, G.L., Albright, L.E. and Glennon, J.R., "Predicting Office Turnover in an Automated Office Situation," Personnel Psychology, 16(3), 1963, 213-219.

In an attempt to reduce the high rate of turnover among clerical employees working in a highly automated office, existing personnel information was examined for items which might discriminate short tenure from long tenure employees. Sources of data were the application blank, test scores and reference inquiries. Nine items for women and seven for men were found which cross-validated significantly and predicted well using extension samples.

- 3-47. Siegel, A.I., et al., "Absolute Scaling of Job Performance," Journal of Applied Psychology, 52(4), August, 1968, 313-318.

A technique for evaluating job performance directly in terms of organizational objectives without reference to normative materials is described. The technique involves the establishment of critical performance levels, as derived from a guttman scale, in terms of stated organizational objectives and relating performance to these levels. Reliability and validity are discussed.



- 3-48. Sokolik, S.L., "Guidelines in the Search for Effective Appraisals," Personnel Journal, 46(11), 1967, 660-68.

A program of selective appraisals, which enables managers to evaluate his workers differently for different purposes, is advocated. Assets of the program are discussed and administrative, motivational, developmental and predictive facets of program are elaborated.

- 3-49. Steinkamp, S.W., "Some Characteristics of Effective Interviewers," Journal of Applied Psychology, 50(6), 1966, 487-492.

Sample addresses were selected on a probability basis from the records of financial institutions and the holdings reported to the interviewer were compared with institution records for the day of the interview. The frequency with which an interviewer obtained information about the validated account(s) forms the basis for the criteria of interviewer effectiveness. It was found that the more effective interviewers scored significantly higher on the dominance and intraception tests and lower on the succorance and change tests of the Edwards Personal Preference Schedule (EPPS). In addition they scored significantly higher in reference evaluations of self-confidence and attention to detail.

- 3-50. Stephenson, R.W. and Hewitt, D.R., "Evaluating Work Performance of Personnel Advisors," Personnel Administration, 31(3), 1968, 17-23.

Describes one approach in which performance objectives were set for personnel advisors and procedures were developed by which the performance of those people could be evaluated in terms of a common set of performance standards. Describes the development and use of the system as well as the "Personnel Advisor Performance Evaluation" form.

- 3-51. Wetjen, J.F., "Performance appraisals; a Study of Systems Used to Appraise Employee Performance," Training and Development Journal, 22(3), March 1968, 46-57.

Three appraisal systems are discussed (the trait approach, critical incidents, appraisal by results) and evaluated according to certain appraisal criteria. The appraisal by results system was judged to be the most effective, with the fewest disadvantages.

- 3-52. Wofford, J.C., Behavior Styles and Performance Effectiveness," Personnel Psychology, 20(4), 1967, 461-495.

Purpose of this review article:

- (a) to present an approach to classifying and describing behaviour styles which will serve as a foundation for future research in personnel psychology.
- (b) to describe a method of categorizing and defining job goals



- and performance activities which will serve effectively in both the research and applied functions of the personnel field.
- (c) to identify tentatively the behaviour styles which research has shown to be associated with effective performance.

#### 4. MANPOWER DEVELOPMENT

- 4-1. Dubois, Edward A.C., The Case for Employee Education, New York: American Management Association, 1967, (Monograph).  
Suggests ways that an employee-education program may reduce labor turnover in a company.
- 4-2. American Management Association, Personnel Division, Making the Most of Training Opportunities, New York: American Management Association, Management Bulletin, No. 73, 1966.  
Includes articles on subjects such as a systems approach to training for business, audiovisual aids, participative techniques, education under the cooperative plan, and accredited correspondence education for business training.
- 4-3. Auld, H.D. and Crawford, J.D., "A Note on Management Games," Occupational Psychology, 37(2), 1963, 130-137.  
Discusses different types of management games, their cost, speed and accuracy, their use as training devices, their limitations.
- 4-4. Banaka, W.H., "Invention: A Key to Effective Coaching," Training and Development Journal, 21(11), 1967, 44-6+.  
Coaching course of Tektronix Inc., is pictured, course provides method for training managers how to invent performance indicators.
- 4-5. Belbin, Eunice and Sylvia Shimmmin, "Training the Middle Aged for Inspection Work," Occupational Psychology, 38(1), 1964, 49-57.  
Discusses suitable forms of training and retraining for people in the middle and later years of working life for usual inspection jobs. Three experiments using three methods of training:  
(1) the Traditional Method  
(2) the Lead-in Method  
(3) the Discrimination Method  
are described in terms of their relative advantages and disadvantages.
- 4-6. Black, F.H., "Educational Assistance Programs," Training and Development Journal, 21(12), 1967, 42-4+.  
Results of survey questionnaire to learn industry's practices in regard to educational assistance programs for employees are reported.
- 4-7. Blake, R.R. and Mouton, Jane S., "Grid Organization Development " Personnel Administration, 30(1), 1967, 6-14.  
Describes the Managerial Grid in six phases  
(1) managers learn the Grid concepts in seminars of a week's length.

- (2) work team development.
- (3) intergroup development
- (4) production of an organization blueprint
- (5) blueprint implementation
- (6) stabilization

- 4-8. Brown, Eva M., "Influence of Training, Method and Relationship on the Halo Effect," Journal of Applied Psychology, 52(3), 1968, 195-199.

120 student nurses each rated 6 peers on 10-point scales for 6 sets of traits. The variance of a judge's rating for each object was found and the variance scores of the 6 objects for each judge summed. This dispersion score was used as the measure of the halo effect. It was found that trained judges exhibited less halo than untrained judges, but that ratings made by rating one individual on six traits at a time yielded substantially the same amount of halo as did ratings made by rating all individuals on one trait at a time. The relationship between the judge and the object was a significant variable for the untrained judges. Here the ratings for the less intense relationship exhibited significantly more halo than the ratings for the intense relationship. Training of the judges improved all ratings to the point where the judge-object relationship did not play a significant role.

- 4-9. Burke, W.W. and Hornstein, H.A., "Conceptual vs Experiential Management Training," Training and Development Journal, Vol.21, December 1967, 12-17.

Results of attempt to integrate instrumented and T-group laboratory training are reported.

- 4-10. Bursk, E.C., "Education and the Corporation," Management of Personnel Quarterly, Vol.6, Fall, 1967.

Necessity and advantages of company training and education programs for managers are discussed.

- 4-11. Caldwell, L.K., "Determining Training Needs for Organizational Effectiveness," Personnel Administration, 26(2), 1963, 11-19.

Effective training programs require a tie-in with the general policies and programs of the organization. Specific needs can best be determined by manpower surveys; realistic cost data should also be ascertained. Discusses estimating training needs and costs, identifying training needs surveying training needs, the scope and content of training surveys, estimating training costs, establishing training priorities, and relating training to comprehensive personnel development.

- 4-12. Carron, T.J., "Human Relations Training and Attitude Change: A Vector

Analysis," Personnel Psychology, 17(4), 1964, 403-424.

In an attempt to evaluate human relations training in terms of changed attitudes, the author made attitude measurements on both experimental and control groups at three different times before training; immediately after training six months later and 17 months after the end of training. Fleishman's LOQ and Adorno's F-Scale were used for the attitude measures.

Vector geometry was used to analyze the Structure and Consideration dimensions of Fleishman's LOQ.

The author would like to see more evaluation research based on the Leadership Behavior Description Questionnaire.

- 4-13. Catalanello, R.F. and Kirkpatrick, D.L., "Evaluating Training Programs -- The State of the Art," Training and Development Journal, 22(5), 1968, 2-9.

A survey of 154 companies indicates that most are measuring reaction to training programs. Evaluation of training programs was broken down into four steps (reaction, learning, behavior and results). Evaluation is really in its infancy. Training people should attempt to learn and apply all evaluative techniques, not just reaction.

- 4-14. Chaney, Fred B. and Teel, K.S., "Improving Inspector Performance Through Training and Visual Aids," Journal of Applied Psychology, 51(4), 1967, 311-315.

An experimental study was performed to evaluate, singly and in combination, the effectiveness of a four-hour training program and a set of visual aids designed to improve the performance of 27 experienced machined-parts inspectors. The criterion used was the percentage of true defects detected in a selected sample of machined parts. Findings indicated that:

- (a) use of training alone resulted in a 32% increase in defects detected.
- (b) use of visual aids alone resulted in a 42% increase and
- (c) use of both resulted in a 71% increase while
- (d) performance of the control group did not change.

- 4-15. Collett, Merrill J., "Simulation as a Management Development Tool," Personnel Administration, 25(2), 1962, 48-51.

"Gaming" has strengths and weaknesses as a management training tool. Modified behavior is the only test of its effectiveness.

- 4-16. Cross, J.L., "Return on Personnel Assets," Personnel Journal, 46(9), 1967, 502-7.

A conceptual framework for practical management development program is given.

- 4-17. Cummings, R.J., "Removing Intuition from Course Development," Training and Development Journal, 22(1), January 1968, 18-30.  
Training courses can be designed by applying logical methods of development. Objectives of this approach are to avoid, over- and under-training or irrelevant training. A job/task analysis is prepared for the job, performance standards are established and trainee qualifications are assessed. The course is designed by converting the training requirements to specific objectives of instruction.
- 4-18. Duclos, G.G., "Occupational Training in Manpower Development," Canadian Personnel and Industrial Relations Journal, 14(4), 1967, 29-31.  
Terms, purposes and operations of Canada's Occupational Training Program for Adults are defined.
- 4-19. Filley, A.C. and Jesse, F.C., "Training Leadership Style: A survey of Research," Personnel Administration, 28(3), 1965, 14-21.  
The Trainer may be leader centered or group centered depending upon the goals in the teaching situation, group characteristics, training time and training content. Sets out the conditions under which leader-centered and group centered training methods are more effective.
- 4-20. Foreman, W.J., "Management Development Methods," Management Review, Vol.56, November, 1967, 46-9.  
In a recent survey 43 out of 45 personnel directors reported on-the-job training as their chief management development tool, and 42 listed conference and discussion methods next. Details on recruiting sources, desirable characteristics and educational background of trainees are given.
- 4-21. Fox, W.M., "A Measure of the Effectiveness of the Case Method in Teaching Human Relations," Personnel Administration, 26(4), 1963, 53-57.  
With the aid of analytical techniques, progress in using the case method can be measured.
- 4-22. Frank, D.S., "Group Counseling in Baltimore," Employment Service Review, Vol.4, October, 1967, 37-40.  
New group counselling procedure has been introduced to deal with Baltimore's high rates of joblessness and underemployment. In discussion session, under-employed people voluntarily talk about their problem and find out why they are out of work. Comments are on mechanics and results of approach.
- 4-23. Friedlander, F., "The Impact of Organizational Training Laboratories Upon the Effectiveness and Interaction of Ongoing Work Groups,"



Personnel Psychology, 20(3), 1967, 289-307.

The impact upon four work groups (N=31) which participated in organizational training laboratory sessions is evaluated in comparison with eight similar groups (N=60) which did not participate. Criteria were six-factored dimensions, each composed of items gathered from earlier interviews which group members perceived as problems. Significant changes occurred in training groups in the following three dimensions: group effectiveness, mutual influence and personal involvement. No significant changes occurred in leader approachability, intragroup trust or in the evaluation of group meetings. The relevance of a work unit participating in training as a total group, rather than each member participating in a separate session, is discussed.

- 4-24. Gavales, D., "Effects of Combined Counselling and Vocational Training on Personal Adjustment," Journal of Applied Psychology, 50(1), 1966, 18-21.

To evaluate the effects of combined counseling and vocational training on personal adjustment, the Manson Evaluation test was administered to 85 students during the first two weeks of training and again near termination. The students were between 17 and 21 years of age and were generally characterized by previous failure in social, academic and vocational endeavors. All students and classes received regular individual and group counseling by skilled counselors. Comparisons of "before" and "after" Manson scores revealed consistent and highly significant gains in personal adjustment. The findings were interpreted within the framework of current governmental efforts to combat social ills, such as poverty, delinquency and unemployment.

- 4-25. Golembiewski, R.T., "The 'Laboratory Approach' to Organization Change: Schema of a Method," Public Administrative Review, Vol.27, September, 1967, 211-21.

Laboratory approach is described; its limitations, bias, goals and techniques, consistency with broad features of organizational life, and inadequacies as vehicle of change are analyzed.

- 4-26. Gray, Irwin and Borecki, Theodore B., "Utilizing Objectives and the Concept of Phases in Planning Supervisory Training Programs," Personnel Journal, 47(5), 1965, 343-346.

This article gives a suggested structure for patterning and tailoring training activities using a series of phases guided by an over-all set of objectives. An aid to the trainer in determining the techniques to be used and the point in the trainee's development at which to use them. The emphasis is on the training methods to be used and how the phase scheme may be used by a trainer.

Levels of training, transition training, "in-depth", and modernization training are discussed.

- 4-27. House, R.J., "Managerial Reactions to Two Methods of Management Training," Personnel Psychology, 18(3), 1965, 311-319.

To date, there has been widespread acceptance of the student-centered method of instruction by personnel managers and training directors. The literature suggests much less enthusiasm for the leader-centered method. The present study compares managerial reactions to both methods of training during a 160 hour management development program.

The findings indicate a need to question the exclusive use of either method.

- 4-28. House, R.J., "Prerequisites for Successful Management Development," Personnel Administration, 26(3), 1963, 51-56.

Nine basic suggestions are offered to achieve effective development of subordinates including job definitions, evaluation of subordinates on standards of job performance, periodic counseling.

- 4-29. House, R.J., "T-Group Education and Leadership Effectiveness: A Review of the Empiric Literature and a Critical Evaluation," Personnel Psychology, 20(1), 1967, 1-32.

Some of the issues covered are the nature of the controversy, studies concerned with events throughout the training, effect of T-Groups on behavior, the effective use of T-Group, questions concerning ethical issues and recommendations offered as precautionary measures in the use of T-Group training.

- 4-30. Howard, D.D., "What to do When Salesmen Run Out of Steam," Management Review, Vol.56, September, 1967, 4-11.

Because selling experiences are often emotionally upsetting, every sales manager needs to develop skill in counseling his salesmen whose self-images have been shaken; one technique that has been used with considerable success is outlined.

- 4-31. Johnston, W.A., "Transfer of Team Skills as a Function of Type of Training," Journal of Applied Psychology, 50(2), 1966, 102-108.

Five groups varying in training context (team vs individual) and skill acquisition (individual, coordination and communication skills) were compared at transfer on team (coordination of interceptions) and individual (number of interceptions) performance of a simulated radar-controlled aerial intercept task. Individual performance was unaffected by the training variables, but team performance was a positive function of the emphasis on coordination skills during training. When acquisition of coordination skills was held constant, context had no effect on transfer performance. Intrateam communications retarded but prohibiting these communications during training did not lessen

their disruptive effect at transfer. This inhibitory influence of team communications reflected the verbal transmittal of information irrelevant to the task or more readily obtainable from the radar scopes.

- 4-32. Kontnier, L., "Glimpets and Nonpeople," Engineering Service Review, Vol.4, October, 1967, 32-4.

Human Resources Development program sponsored by Colorado University places emphasis on whole individual. Training of personnel responsible for conducting program, types of trainees and course activities are described.

- 4-33. Lundberg, C.C., "Management Development Refocused," Personnel Administration, 29(1), 1966, 39-44.

Discusses the "what, when, who" — regarding management development programs. What executive skills should be the focus of the program? Should the program be internal or external to the organization? What are the needs of management and how can these be met by learning ability, educational background, employee acceptance of the opportunity to enroll in the retraining program and number of employees.

- 4-34. Mayo, G.D. and Longo, A.A., "Training Time and Programmed Instruction," Journal of Applied Psychology, 50(1), 1966, 1-4.

The hypothesis was tested that training time can be reduced by means of programmed instruction, without loss in training quality. 226 U.S. Navy and Marine Corps trainees in electronics fundamentals served as salesmen. A matched group design was used in which a 31% time saving on the part of the programmed instruction group was an integral part of the experiment. On the two measures of learning, which followed the instruction, the programmed instruction group scored significantly higher ( $p < .01$ ) on one, while no significant difference was found on the other. The hypothesis was considered to be sustained.

- 4-36. "MDTA in the Redwood Forest," Employment Service Review, Vol.4, July, 1967, 28-9.

Success of training program in area where seasonal employment and skill lack create high unemployment is described.

- 4-37. Moffie, D.J., Calhoon, R. and O'Brien, J.K., "Evaluation of a Management Development Program," Personnel Psychology, 17(4), 1964, 431-40.

Participants in this study indicated that they thought the course was worthwhile and applicable to their work and that they would recommend the course to other potential participants. Experimental evaluation of the course showed, however, that whatever losses and gains occurred in the experimental and control groups were not

statistically significant Management plans to continue use of the training program in view of the fact that in specific situations the techniques learned in the course appear to be beneficial in the solution of everyday manufacturing problems.

- 4-38. Moore, L.F., "Business Games Versus Cases as Tools of Learning," Training and Development Journal, 21(10), 1967, 13-23.  
In a controlled experiment, the business game was compared to the case method. Fact mastery, logical reasoning ability, explicitness of concept and general and structural learning were measured and compared for control and experimental subject groupings. For presentation of industrial subject matter used in this study, the case method appeared generally superior as a learning device. Subject interest, however, was higher with respect to the business game.
- 4-39. Muniz, P., "Empathy Training for Management Development Trainer," Training and Development Journal, 21(10), 1967, 24-8.  
Tour of duty as supervisor and exposure to actual supervisory experience will greatly enhance management development-trainer's effectiveness.
- 4-40. Naylor, J.C., Briggs, G.E. and Reed, W.G., "Task Coherence, Training Time, and Retention Interval Effects on Skill Retention," Journal of Applied Psychology, 52 (5), 1968, 286-393.  
Amount of training, secondary task coherence and length of retention interval, each at two levels, were evaluated in terms of long-term skill retention effects. Retention loss varied inversely with amount of training and with secondary task coherence for both tasks. Absolute retention levels varied directly with the training and task coherence variables and inversely with retention interval. From these and previous data, task coherence emerges as an important variable in skill acquisition and retention.
- 4-41. Newport, M.G., "Problems of Middle Management Development," Personnel Administration, 28(2), 1965, 17-20.  
Based on a study of 121 companies, this study has shown four basic problems associated with middle management development as expressed by 83 of these companies  
(1) lack of acceptance  
(2) lack of top-management support  
(3) lack of time  
(4) determining training needs
- 4-42. Nunn, G.E. and L.L. Byars, "Quantitative Decision Tools and Management Development Programs," Training and Development Journal, 21(11), 1967, 9-22.



Quantitative methods and operation research in management development programs are discussed: criteria for evaluating and assuring success of operation research training programs are formulated.

- 4-43. Odiorne, G.S., "The Trouble with Sensitivity Training," Training and Development Journal, 17(10), October, 1963, 9-20.

Describes the nature of sensitivity training. Ten different examples of how sensitivity training has been used are given along with comments from the participants. The author believes that the sensitivity training movement in its present state is unsatisfactory and needs overhauling.

- 4-44. O'Donrell, Cyril, "Managerial Training, A System Approach," Training and Development Journal, 22(1), January 1968, 2-11.

Explains the management process as a system. Training is seen as a means of aiding the manager to achieve the objectives for which he is accountable. Discusses training in managerial appraisal, continuing problems in managerial appraisal, management by results etc. Purpose is to enable those who are involved in management training to understand what is really the purpose of training and what skills are improved.

- 4-45. Price, K.O., "Training: An Intersection of Professions," Personnel Administration, 29(5), 1966, 45-48.

Discusses the several major components of a training program (objectives, administration, content, training techniques, evaluation writing). The training director cannot be an expert in all these functions. He must serve as the organizer and coordinator of experts in these areas.

- 4-46. Reddin, W.J., "The 3-D Organizational Effectiveness Program," Training and Development Journal, 22(3), 1968, 22-28.

A program which concentrates on change in the context of effectiveness. Nine different elements which may be used singly or in combination to accomplish particular change objectives are described.

e.g. Stage 1 -	<u>Program</u>	<u>Org. Variable</u>
	Managerial	Managerial Style
	Style Seminar Lab	

Advantages of this program are discussed.

- 4-47. Reis, P.S. and Fahrenbruch, S.I., "Quality Training and Awareness Aids to Defect Prevention," Training and Development Journal, 22(2), 1968, 28-34.

At Aerojet, a series of programs are concerned with reliability and quality education, training and awareness. Each employee is provided



with the means to do an adequate job and evaluate his own performance.

- 4-48. Rose, H.R., "A Plan for Training Evaluation," Training and Development Journal, 22(5), 1968, 38-51.

The use of appropriate standards and techniques can provide valid information for the improvement of training. The approach to evaluation as set forth here is flexible and can be applied in varying situations. Elements to evaluate are the job/task analysis, training requirements, plans for conducting training administration of the training program, formal training process, on-the-job training process, end of course outcomes, performance on-the-job. 13 methods of evaluation are then discussed.

- 4-49. Sanders, G.S., "Training of Management in Research," Research Management, IX(6), 1966, 365-370.

To cope with the difficult task of identifying and teaching the techniques required for managing a research department to the managers of that department, the Urwick Management Centre, conducts one-week seminars in research management. The structure of the seminar includes directing research, leading research and the administrative processes.

- 4-50. Simmonds, G.R., "Organization Development: A Key to Future Growth," Personnel Administration, 30(1), 1967, 19-24.

Describes a case history in an electronics company of how the Managerial Grid was applied. The benefits and disadvantages of the project are discussed.

- 4-51. Sorcher, M. and Meyer, H.H., "Motivation and Job Performance," Personnel Administration, 31(4), 1968, 9-21.

Describes studies focused on improving the productive motivation of workers. The main problem at issue is whether the redesign of a job or alteration in working conditions can bring about enough change in attitude to result in a favorable effect on job performance. Presents a research model for the study of job design.

- 4-52.\* Starbuck, William H., "The Efficiency of British and American Retail Employees," Administrative Science Quarterly, December 1966, 345-385.

A study investigating the relation between sales volume per employee and the size of retail stores. A mathematical theory is developed to explain the behavior of the sales per employee curve. The theory is then applied to American and British data to analyze the cross-cultural differences in retail organization. Brief findings:

- British clerks specialize more than American and sell faster

- Specialization restricts personnel transfers within the store
- American stores are more efficient than British stores.

- 4-53. Steele, F.I. and Burke, W.W., "A Design for Theory Input in a Training Laboratory (Results of Testing Some Innovations in Conceptual Learning)," Training and Development Journal, 22(3), 1968, 2-7.

This article reports another attempt as well as a different approach to the problem of integrating the conceptual and experiential aspects of management training.

- 4-54. Stegger, G.X., "Some Factors Affecting Executive Development," Personnel Administration, 26(3), 1963, 35-45.

Organizations may actively encourage or passively support managers to participate in out-of-plant advanced management courses. The implications, based on research are presented.

- 4-55. Strohmer, Arthur F., "Labor Relations Training for Foremen: A New Approach," Personnel Journal, 47(1), 1968, 48-49 (+ss)

Description of a training program carried out by Armour and Comp. in 1966 with the objectives of increasing the foreman's awareness of his responsibility and authority in labor relations and to increase his understanding of the intent of the labor contract. The training techniques utilized (and described in the article) were programmed instruction, case study analysis, role play, group discussion and problem solving.

The results of the program were successful.

- 4-56. Toussaint, M.N. and Munson, D.E., "How Not to Conduct a Management Training Program," Personnel Administration, 26(5), 1963, 12-20, 29.

The authors relate an actual experience for readers who wish to probe an unsuccessful management training effort.

- 4-57. "Trends in Management Training," Administrative Management, 38(2), 1967, 16-20.

A survey of 75 companies to examine five current trends in management development and training. Results expressed in terms of:

- (1) formal vs informal training
- (2) type of training programs
- (3) sources of recruitment
- (4) desired personal characteristic
- (5) types of educational backgrounds.

- 4-58. Whitaker, Galvin (Ed.), "T-Group Training: Group Dynamics in Management Education," ATM Occasional Papers, No. 2, Oxford, England: Basil Blackwell, 1965.

A series of articles on T-Group training:

- (1) outline accounts of T-group training in Europe and the U.K.
- (2) four articles evaluating T-groups, theorists and trainers giving their points of view
- (3) four articles discussing applications of T-group methods
- (4) an account of a long-term application within an industrial company.

- 4-59. Wickert, F.R. and McFarland, D.E. (Eds.), Measuring Executive Effectiveness, New York: Appleton-Century-Crofts, 1967.

Evaluates current status of predictors and criteria of executive effectiveness; how "executive style" is affected by situational factors; research on executive behavior.

- 4-60. Wilson, J.E., Mullen, D.P. and Morton, R.B., "Sensitivity Training for Individual Growth -- Team Training for Organization Development?" Training and Development Journal, 22(1), 1968, 47-63.

A study of the perceived impact of the two approaches was undertaken by the Training Division of the State Personnel Board in California. Results: Sensitivity training may be valuable for the individuals in his interpersonal relationships both on and off the job. Organizational team training emphasizes work and work relationships; may be more effective for the individual in his role as a leader and member of the organization.

- 4-61. Wilson, W.H. and Miller, D.E., "A Two-Hour Leadership Laboratory," Training and Development Journal, 22(1), 1968, 12-16.

A short program in a basic supervisor's training course is described. The components of the program are:

- (1) the task experience
- (2) the lecture
- (3) discussion and analysis of task experience
- (4) integration with real-life work situation

- 4-62. Winn, A., "Laboratory Training in Industry," Personnel Administration, 27(3), 1964, 6-10, 17.

Compares the case-method, role-playing and laboratory method. Advantages of T-Group training are discussed, how trainees are selected etc. Discusses ALCAN's experience with T-Group training.

- 4-63. Winston, J.S., "A Systems Approach to Training and Development," Training and Development Journal, 22(6), 1968, 13-20.

Concerned with techniques applied to the design and development of information systems and improvement of the quality and meaning of education and training. Discusses the controlled exercise, the normative exercise, simulation and modeling, and system design.

## 5. COMPENSATION AND REWARD

- 5-1. American Management Association. Insurance Division. Employee Benefit and Pension Management; Expanding Opportunities and Responsibilities, American Management Association, Management Bulletin No. 59, 1965.  
Includes articles such as what management expects of the employee benefit and pension manager, retirement counseling, new developments in employee profit sharing, pension funding corporate profits.
- 5-2. "British Want Benefits More Than Raises," Administrative Management, Vol.28, September, 1967, 24-30.  
Leading causes of personnel difficulties encountered by some American companies with operations in Great Britain are found in lack of knowledge of what is meaningful in terms of motivation and compensation, and in recruitment and selection of managers.
- 5-3. "Gradual Retirement Plan Eases Transition," Administrative Management, Vol.28, November, 1967, 48.  
Discusses a gradual retirement plan in which employee begins to take increased amounts of time off, can have benefits for both employee and company. Three methods of doing this are discussed.
- 5-4. Adams, J. Stacy, "Wage Inequities, Productivity and Work Quality," Industrial Relations, 3(1), 1963, 9-16.  
The condition of "cognitive dissonance," the feeling that one's results are inconsistent with his expectations, is examined in this study. After analyzing the data from three experiments, the author concludes that a worker, instead of always attempting to minimize effort and maximize gains may vary his output according to his perception of himself as underpaid or overpaid.
- 5-5. Andrews, I.R., "Wage Inequity and Job Performance: an Experimental Study," Journal of Applied Psychology, 51(1), 1967, 39-45.  
In performing an inherently dull task, over-paid students maintained equity by reducing work quantity and increasing work quality. The underpaid students increased work quantity but decreased work quality.
- 5-6. Beer, Michael, "Needs and Need Satisfaction Among Clerical Workers in Complex and Routine Jobs," Personnel Psychology, 21(2), 1968, 209-222.  
This study focuses on the importance of defining accurately what constitutes job enlargement. No substantial differences in either need satisfaction patterns or motivation was found between clerical employees in routine jobs and those in more complex jobs. An increase



in variety and responsibility does not necessarily result in increasing higher order need satisfaction or motivation. How much job enlargement makes a difference in these variables is still open to question and must be the subject of further investigation.

- 5-7. Breener, M.H. & Lockwood, H.C., "Salary as a Predictor of Salary: a 20-Year Study," Journal of Applied Psychology, 49 (4), 1965, 295-298.

This study investigated the value of using salary after a few years in an organization as a predictor of and therefore as an intermediate criterion for salary at a later date. Salary data were collected for each year of the 20-year careers of 52 aircraft engineers. The salaries were combined to yield yearly distributions. One for beginning salary and one for each year of experience. The resulting distributions were intercorrelated and the following results obtained: a) 92% of the intercorrelations were significant at the .01 level. b) correlations between equidistant years became larger as tenure increased and c) the variance of salaries increased with increasing tenure. It is concluded that salary early in a man's career can be used as an intermediate criterion.

- 5-8. Centers, R. & Bugental, D.E., "Intrinsic and Extrinsic Job Motivations Among Different Segments of the Working Population," Journal of Applied Psychology, 50(3), 1966, 193-197.

A selected cross-section of the working population (N=692) was interviewed with respect to their job motivations. The extent to which extrinsic or intrinsic job components were valued was found to be related to occupational level. At higher occupational levels, intrinsic job components (opportunity for self-expression, interest-value of work etc.) were more valued. At lower occupational levels, extrinsic job components (pay, security) were more valued. No sex differences were found in the value placed on intrinsic or extrinsic factors in general. However, women placed a higher value on "good co-workers" than did men, while men placed a relatively higher value on the opportunity to use their talent or skill.

- 5-9. Chalupsky, A.B., "Incentive Practices as Viewed by Scientists and Managers of Pharmaceutical Laboratories," Personal Psychology, 17 (4), 1964, 385-401.

A questionnaire survey on current incentive practices and their effectiveness conducted with research directors of 13 pharmaceutical companies and 75 scientists in one laboratory. Both high and low producers among research managers and scientists (more than managers or less productive scientists) valued freedom to come and go, and time off to attend professional meetings. Younger scientists valued educational assistance more than did their elders. Older scientists valued more, commendations for superior performance, stock options and purchases.



- 5-10. Costello, Timothy W., and Sheldon S. Zalkind, "Merit Raise or Merit Bonus: A Psychological Approach," Personnel Administration, 25(6), 1962, 10-17.

Although merit raises are supposed to motivate better performance, few plans do so in practice. The authors present a highly original plan, based on motivation and learning principles to make merit raises true motivators.

- 5-11. Dempsey, F.K., "Too Many Benefits Spoil The Employee," Administration Management, Vol.28, October, 1967, 45-46.

Benefit programs won't tie best managers to company but only those managers having limited or marginal value.

- 5-12. Dunnette, M.D., Lawler, E.E., Weick, K.E., and Opsahl, R.L., "The Role of Financial Compensation in Managerial Motivation," Organizational Behavior and Human Performance, 2(2), 1967, 175-216.

A group of four papers on aspects of managerial compensation and motivation presented during the spring, 1965 meetings of the Midwestern Psychological Association. Topics discussed included:

1. An instrumental model of managerial motivation.
2. Effects of salary secrecy policies on manager satisfaction.
3. Effects of insufficient rewards on intensity of effort.
4. An overview of current knowledge about managerial compensation and its effect on job behaviour.

- 5-13. Foegen, J.H., Stanley, J.D., and Stanley, M.T., "Re-Examining Fringe Benefits: 1. Fringe Detriments, 2. Fringe Benefit Policy: Orientation and Objectives," Personnel Administration, 25 (3), 1962, 13-28.

In the first article, some fringe "detriments" are discussed. In the 2nd, some further thoughts are offered: Do we need a broad, over-all approach to fringes, rather than a narrow, technical one? Is a long-range policy as opposed to temporarily expedient patch-work needed?

- 5-14. Friedlander, F., "Motivations to Work and Organizational Performance," Journal of Applied Psychology, 50 (2), 1966, 143-152.

Measures of 3 types of motivation to work were related to 2 criteria of job performance, both of which reflect the degree to which the organization has rewarded individual behaviours. In the white-collar sample (N=1047), which was composed largely of technical personnel, low performers were motivated primarily by the social environment of the job and to a lesser extent by the opportunity of gaining recognition through advancement, but few significant relationships were found between intrinsic self actualizing motivations and job performance. In the Blue-collar sample (N=421) no motivational relationships were found between any of the age and tenure, work became more

meaningful for high performers but less meaningful for low performers. Although the importance of the social environment increased for both high and low performers.

- 5-15. Goodman, P. and Friedman, A., "An Examination of The Effect of Wage Inequity in the Hourly Condition," Organizational Behavior and Human Performance, 3 (3), August 1968, 340-352.

An examination of the effect of overpayment on job productivity, the relationship between quality and quantity of job performance, and the effect of known production rates on equity resolution. The data generally supports Adams' theory that overpaid subjects produce more than equitably paid subjects.

- 5-16. Grove, Byron A., "Attendance Reward Plan Pays," Personnel Journal, 47(2), 1968, 119-120.

A case describing a small work force where rewards for perfect attendance paid off. The firm produced small airplane parts and had a total employment of 200 (non-unionized). The plan and its results are described. Of 142 eligible employees, 30 qualified for perfect attendance awards (averaging \$125.00) for one six month period. This plan should be investigated for possible use where daily attendance is especially important to the efficiency and profitability of the company.

- 5-17. Haire, Mason., E.E. Ghisilli & M.E. Gordon, "A Psychological Study of Pay," Journal of Applied Psychology, 51(4), August 1967.

A study in 3 sections of empirical data on managerial compensation for 3 groups of managers. (N=90) 1. a description of the distributional characteristics of pay over time. 2. the correlation of pay with pay over time. 3. a statistical model of pay capitalizing on the cumulative character of pay. The potential psychological leverage of hitherto little considered variables stands out eg., without increasing the total salary bill, management of the variance of pay over a group in a given year and of the correlation of pay with raises from year to year allows one to deal with the level of aspiration of the individual and his relative standing in the group. The managerial implications of the statistical behaviour of pay are discussed in detail.

- 5-18. Hickson, D.J., "Worker Choice of Payment System," Occupational Psychology, 37 (2), 1963, 93-100.

Eighteen semi-skilled machine operators chose as their system of payment a time-rate plus small piecework rate, rather than a larger piecework rate supported by a high fall-back minimum guarantee. They appeared to want: 1) security and stability of earnings rather than the opportunity of exceptional money when things went well. 2) an egalitarian system which limited any differential between the earnings

of members of the same work group.

- 5-19. Jehring, J.J., "A Contrast Between Two Approaches To Total Systems Incentives," California Management Review, Vol.10, Winter, 1967, 7-14.

Production sharing plan (Scanlon) was replaced by profit sharing plan as better incentive. Case study discusses various aspects of both plans including their operation.

- 5-20. Lawler, E.E. & O'Gara, P.W., "Effects of Inequity Produced By Underpayment on Work Output, Work Quality and Attitudes Toward The Work," Journal of Applied Psychology, 51 (5), 1967, 403-410.

Study provides a further test of Adams' theory of equity. Underpaid Ss produced more interviews than equitably paid Ss, but the interviews were of lower quality. Underpaid Ss saw the job as more interesting than equitably paid Ss, but less important and challenging. Study generally supports equity theory.

- 5-21. Lawler, E.E. III, "Managers' Attitudes Toward How Their Pay is and Should Be Determined," Journal of Applied Psychology, 50 (4), 1966, 273-279.

A questionnaire study investigating the perceptions of 563 managers towards how their pay is determined and how they felt it should be determined. Managers agreed that merit should be the most important determinant of their pay. Attitudes toward what factors should be important in determining pay were shown to be related to the managers' perceptions of their relative standing on the various factors. There was a positive correlation between how well the managers felt they compared with other managers on each factor and how important they felt the factor should be. The data also showed that there was a tendency for lack of congruence between a manager's attitudes toward how his pay should be determined and how it is determined to be associated with high dissatisfaction with pay.

- 5-22. Lawler, E.E. III, "Managers' Perceptions of Their Subordinates Pay and of Their Superiors' Pay," Personnel Psychology, 18(4), 1965, 413-422.

This study investigated by means of a questionnaire the attitudes and perceptions of 563 managers toward the pay of their superiors and their subordinates. The results indicated that managers felt there was too small a difference between their own pay and that of both their superiors and their subordinates. A significant relationship was found between the feeling by a manager that there was too small a difference between his subordinates pay and his own pay and the feeling that his own pay was too low. The results also showed that managers tended to consistently overestimate the pay of their subordinates. It was suggested that some of the dissatisfaction of the managers with the

difference between their own pay and that of their subordinates might be due to this tendency to overestimate the subordinates' pay.

- 5-23. Lawler, E.E. III & Porter L.W., "Predicting Managers' Pay and Their Satisfaction With Their Pay," Personnel Psychology, 19 (4), 1966, 363-373.

Six of seven demographic variables were found to be statistically significant predictors of manager's pay. Of the six factors, management level had the strongest relationship to the managers' pay. Only education level was not significantly related to pay. The straightforward implication was drawn from this finding that organizations can expect higher pay to lead to greater satisfaction with pay, all other factors being equal.

- 5-24. Levine, H.A., "Educational Opportunity: A New Fringe Benefit For Collective Bargaining," Changing Education, Vol.2, Fall, 1967, 42-46.

Since workers and management benefit when employees add to their education, unions should demand classroom time and pay for their members. Examples of "education" agreements already signed by several major unions are viewed.

- 5-25. Locke, Edwin A., Bryan, Judith F. & Kendall, L.M., "Goals and Intentions as Mediators of the Effects of Monetary Incentives on Behaviour," Journal of Applied Psychology, 52(2), 1968, 104-121.

Based on the assumption that goals and intentions are the most immediate determinants of an individual's behavior, it was hypothesized that monetary incentives would affect task performance only through or by means of their effects on the individual's goals or intentions. Five experiments were performed to explore this hypothesis. Two dealt with the relationship of performance goals to level of performance (output) on a task as a function of incentive condition. 3 examined the relationship of behavioral intentions to task choice as a function of incentive. In all 5 studies, significant relationships were obtained between performance goals or behavioural intentions and behaviour. However, when goal or intention level was controlled, there was no effect of monetary incentive on behaviour. In the 3 choice studies where differences were accompanied by equivalent differences in intentions. The data were interpreted as supporting the hypothesis.

- 5-26. Madiman, M.V., "The Working of Incentive Plan in Modern Industries," Industrial Relations (Indian Institute of I.R.) 18 (6), 1966, 237-242.

Some general remarks on incentive systems; conditions necessary for implementing them, types of incentives, some basic aspects of incentive schemes.



- 5-27. Metzler, J., "Are Fringe Benefits An Answer?" Personnel Administration, 29 (4), 1966, 41-44.
- What role do fringe benefits play in satisfying worker needs? How much do they cost? How can benefits be related to needs in such a way as to serve their purpose well? The answers to these questions are discussed. Fringe benefits are categorized and related to specific needs.
- 5-28. Nealy, S.M. and Goodale, J.G., "Worker Preferences Among Time-Off Benefits and Pay," Journal of Applied Psychology, 51 (4), 1967, 357-361.
- 197 industrial workers expressed their preferences among 6 proposals for additional paid time off the job. Preferences for a comparable pay raise was also measured. Extra vacation was most preferred while a proposal to shorten the workday was least preferred. The pay raise was 5th in preference. Differences in preference were related to sex, age, marital status and job satisfaction. Foremen were able to predict overall worker preferences with high accuracy.
- 5-29. Newman, R.I., Jr., Hunt, D.L., Rhodes, F., "Effects of Music on Employee Attitude and Productivity in a Skateboard Factory," Journal of Applied Psychology, 50 (6), 1966, 493-496.
- An experiment was designed to look at the effects of 4 types of music, versus no music, on the quantity and quality of productions and the attitude of workers engaged in the routine task of assembling and packing skateboards. Ss were 26 assembly-line personnel between the ages of 18 and 23. 4 types of music were played: dance, show, folk and popular. These were contrasted with periods during which no music was played. Music conditions were balanced with respect to days of the week over a period of 5 weeks. Results showed that, while employees had a highly favorable attitude toward music and thought they did more work with it, there was no change in measured productivity.
- 5-30. Randall, Edward V. Jr., "Motivation Through Leadership Action," Personnel Journal, 47(2), 1968, 104-108.
- The author recommends the "management-by-objectives" approach to motivating employees and increasing company profits. Motivational theory is implemented along with the profit plan of the organization in the following way. The top managers develop broad department objectives to accompany their profit plan (budget) for the year. Then subordinate managers do the same thing. The two (or more) managerial levels discuss any differences and similarities in objectives, and discuss how they may be implemented. The requirements and benefits of this process are outlined.
- 5-31. Rosen, H., "Occupational Motivation of Research and Development Personnel," Personnel Administration, 26(2), 1963, 37-43.



The relative merits of pay, promotions, fringe benefits and nonfinancial incentives as motivators are discussed in this research report.

- 5-32. Weick, Karl E., "The Concept of Equity in the Perception of Pay," Administrative Science Quarterly, December 1966, 414-439.

"Equity theory" — focuses on the fact that the outcomes of any process of exchange can be perceived as just or unjust, equitable or inequitable. What actions does the person take to restore equity?

This paper discusses ambiguities in the formulation of equity theory and examines organizational variables that limit predictions of the theory.

e.g. behaviour outside the actual work setting, cohesion of group, job aspirations, time perspectives.

Finally, the suggestion is made that equity theory may be relevant to a more limited range of problems than has been realized and that these limiting conditions should be studied.

- 5-33. Weiser, H.J., "Motivating Personnel," Business Topics, Vol.15, Autumn 1967, 21-32.

Psychological and other assumptions found in two prevalent theories on task of managing people are studied; more modern and individual oriented Scanlon Plan is examined. Separate presentations are given on satisfaction of egotistic and social needs, role of supervisor and subordinate participation.

## 6. TESTING AND MEASUREMENT

- 6-1. Bartlett, C.J., "The Use of an Internal Discrimination Index in Forced-choice Scale Construction," Personnel Psychology, 19(2), 1966, 209-213.

This study examined the possibility of using an internal consistency index as a substitute for a validity index in a forced-choice scale construction. The results indicated that the relationship between total score and external criterion was high enough to justify the use of an item-total score correlation as a substitute for a validity index if an external criterion is not available. However, it was recommended that substitutions of an internal consistency index for a validity index be done only in situations where no external criterion is available.

- 6-2. Bell, F.O., Hoff, A.L. and Hoyt, K.B., "Answer Sheets do Make a Difference," Personnel Psychology, 17(1), 1964, 65-71.

Faced with the problem of administering the GATB to a sample population of 7117 individuals, a new machine scoring answer sheet was designed to expedite scoring and analysis. As a control to assure comparability of test results with existing USES data, early samples were randomly divided and approximately half were tested using the new sheet while the other half were tested using the regular USES machine scoring sheets. Results obtained using the new sheet were significantly depressed as compared with results obtained on the USES sheets. The new sheet was redesigned and a second controlled comparison made. Results were more nearly equal, but the scores were not equivalent and did not allow an assumption of comparability of the resulting test data. Consequently, statistical conversion of obtained test results were required. The statistical process of conversion was described and the implications discussed.

- 6-3. Bemis, Stephen E., "Occupational Validity of the General Aptitude Test Battery," Journal of Applied Psychology, 52(3), 1968, 240-244.

20 years of occupational validation on the General Aptitude Test Battery (GATB) are summarized in terms of average validity with (a) job proficiency and training criteria and (b) concurrent and longitudinal studies. These four categories of studies are investigated from the standpoint of both single and multiaptitude prediction. The relative efficiency of many of the 9 GATB aptitudes in predicting criteria is dependent on whether job proficiency or training criteria are used. Longitudinal studies tend to have higher-aptitude criterion correlations than concurrent studies. The median validity of batteries of GATB aptitudes tends to be higher with studies using training criteria or the longitudinal design than the validity of batteries using job-proficiency

criteria or the concurrent design. The summary is based upon 424 studies involving over 25,000 employees, applicants, trainees and students.

- 6-4. Blumberg, H.H., DeSoto, C.B., Kueth, J.L., "Evaluation of Rating Scale Formats," Personnel Psychology, 19(3), 1966, 243-59.

Subjects rated well-known names on a variety of traits, using a nine-point scale. Contrary to rating scale lore, there are no appreciable differences among formats (given the present population and content) regardless of whether (a) the "good" end of a graphic scale is at the left, right, top or bottom, (b) graphic scales or numerical ratings are used or (c) ratings are made one name at a time, one trait at a time or in a matrix with free choice of order. Regardless of format, about 1/3 of the variance came from the names x traits interaction, another third from the names x traits x subjects interaction and the last third from the remaining sources. The various components which may contain "halo" while statistically significant, were of small magnitude.

- 6-5. Buel, W.D., "Items, Scales and Raters: Some Suggestions and Comments," Personnel Administration, 25(5), 1962, 15-20.

Rating scales, a common tool in the personnel management process, can be made more valid. Rater training is vital, too.

- 6-6. Darlington, R.B. and Bishop, Carol H., "Increasing Test Validity by Considering Interitem Correlations," Journal of Applied Psychology, 50(4), 1966, 322-330.

Several investigators have proposed item-selection methods which construct a first-stage test (consisting of the most valid items, then a second-stage test) by adding to the first-stage test items which are moderately valid yet which correlate low with the first-stage test. Several proposed indices for selecting second-stage items were compared and some found noticeably better than others. A third-stage test was found noticeably better than a second-stage test, but a fourth-stage test was found no better than the third-stage test. A method which adds several items to form each new stage was found superior to a method which adds only one item. The best method constructed tests substantially better on cross-validation than methods which ignore interitem correlations.

- 6-7. Darlington, R.B. and Stauffer, G.F., "A Method for Choosing a Cutting Point on a Test," Journal of Applied Psychology, 50(3), 1966, 229-231.

Elementary decision theory is used to derive a formula for finding a cutting point on a continuous test used to distinguish between two criterion groups, when the test scores of each criterion group are distributed approximately normally. The formula considers the

difference between the means of the two criterion groups, the standard deviations of test scores of the two groups, the relative sizes of the two groups and the relative seriousness of a "miss" versus a "false positive."

- 6-8. Darlington, R.B. and Stauffer, G.F., "Use and Evaluation of Discrete Test Information in Decision Making," Journal of Applied Psychology, 50(2), 1966, 125-129.

Elementary decision theory is applied to the problems of evaluating discrete tests or test items used to classify people into several categories and choosing which of several treatments is best for persons falling within each response category. The technique explicitly considers the base rates of the various criterion groups and the relative seriousness of different types of errors of classification, as well as the proportion of each criterion group falling in each response category.

- 6-9. Denton, J.C., "The Validation of Interview-type Data," Personnel Psychology, 17(3), 1964, 281-287.

Although there have been many different types of studies of interviews — studies of the decision-making process, relative speaking time and judgments of interviewers — there have been few studies of the content of employment interviews. The purpose of this study was to investigate a different method for acquiring interview information and to analyze the validity of the response content.

- 6-10. Dicken, C.F. and Black, J.S., "Predictive Validity of Psychometric Evaluations of Supervisors," Journal of Applied Psychology, 49(1), 1965, 34-47.

31 higher level employees in one firm and 26 in another were assessed by objective test batteries. Clinical interpretations of test data, test scores, and other predictors were analyzed with reference to criterion personality ratings and management decisions at a follow-up point of 3½ years for the first sample and 7 years for the second. Predictive validity of test assessments was generally satisfactory in the first sample, although not pragmatically superior to that of certain objective data. Prediction was less satisfactory in the second sample, but more unique to test data. A matching study indicated some correspondence of test reports and criterion personality sketches in the second sample. Uninterpreted test scores were not generally valid except as measures of intelligence. Implications of the sample differences and of the method are discussed.

- 6-11. Droege, R.C., "Effects of Practice on Aptitude Scores," Journal of Applied Psychology, 50(4), 1966, 306-310.

This study investigated long-range effects of practice on the General Aptitude Test Battery (GATB). The design involved testing a sample of

employees of State Employment Security agencies with the GATB and dividing this sample into three subsamples, subsequently retested with an alternate form after one year (N=302), two years (N=288) and three years (N=306). Major findings were

- (a) significant practice effects for all aptitudes for each subsample
- (b) evidence that initial level is a factor in the size of increase for two aptitudes and
- (c) no deterioration in size of relationship between initial testing and retesting for any aptitude over the time span of the study.

- 6-12. Dunnette, M.D., "A Modified Model for Test Validation and Selection Research," Journal of Applied Psychology, 47(5), 1963, 317-23.

It is argued that the classic prediction model is grossly oversimplified and has resulted in corresponding oversimplifications in the design of most validation studies. A modified and more complex prediction model is presented. Implications for future validation research are discussed in the context of the kinds of behaviors to be predicted, the necessity for investigating heteroscedastic and nonlinear relationships and the important advantages in prediction which may be realized by discovering homogeneous subsets of jobs, tests, people and behaviours within which prediction equations may be developed and cross-validated.

- 6-13. Exline, R.U. and Long, Barbara H., "An application of Psychological Scaling Methods to Content Analysis: The Use of Empirically Derived Criterion Weights to Improve Intercoder Reliability," Journal of Applied Psychology, 49(2), 1965, 142-149.

A method is described in which a psychological scaling technique is applied to the analysis of the contents of written messages in order to provide a more precise metric for each measurement. The attribute to be measured was the extent to which each message communicated an attempt on the part of the writer to control the group's decision of procedures. Two scales were developed, a logical scale comprised of nine categories and an empirical scale based on the application of Thurstone's successive interval technique to a set of written messages. The empirical scale was found to have a higher reliability than the logical scale with untrained coders. Possible reasons for the superiority of the empirical scale were discussed and suggestions made concerning its use in future research.

- 6-14. Feinberg, M.R. and Penzer, W.N., "Factor Analysis of a Sales Selection Battery," Personnel Psychology, 17(3), 1964, 319-324.

A sales executive selection battery from 458 applicants was subjected to a principal components factor analysis using varimax factor rotation. The study was undertaken because of the gaps created by the almost



nonexistent factorial studies of an operational sales selection battery. The final rotated matrix yielded seven factors which suggested that the battery of the original 28 scales could be considerably reduced. The factors were identified as follows:

- I - Level of Aspiration
- II - Technical Interest
- III - Anti-Aestheticism
- IV - Religious - Social Values
- V - Social Acquiescence
- VI - Computational-Clerical
- VII - Intellect

Implications of the factor analysis patterns were discussed.

- 6-15. Flanagan, J.C. and Krug, R.E., "Testing in Management Selection: State of the Art," Personnel Administration, Vol.27, 1964, 33-39.

Tailor-made tests can be a valuable tool in predicting managerial success. Discusses different kinds of tests and their probable usefulness in manager selection. Some research examples are referred to.

- 6-16. French, W.L., "Psychological Testing: Some Problems and Solutions," Personnel Administration, 29(2), 1966, 19-24.

Presents a viewpoint on psychological testing: issues such as the validity problem, the clinical-statistical approach to testing, qualifications for using tests.

- 6-17. Ghiselli, E.E., "Moderating Effects and Differential Reliability and Validity," Journal of Applied Psychology, 47(2), 1963, 81-86.

Classic psychometric theory holds that errors of measurement and of prediction are of the same magnitude for all individuals. Interactive effects are not recognized and the psychological structure of all individuals is taken to be the same. To increase reliability and validity of measurement, then, attention is entirely focused on improvement of measuring devices. However, a substantial body of evidence indicates there are systematic individual differences in error, and in the importance a given trait has in determining a particular performance. Reliability and validity of measurement can be increased by the use of moderator variables which predict individual differences in error and in the importance of traits.

- 6-18. Goodstein, L.D. and Schrader, W.J., "An Empirically-derived Managerial Key for the California Psychological Inventory," Journal of Applied Psychology, 47(1), 1963, 42-45.

Chi square comparisons of the responses of 603 managers and supervisors with those of 1748 men — in general indicated that 206 of the 480 California Psychological (CPI) items reliably ( $p < .01$ )

differentiated the two top groups. This CPI Managerial scale (the 206 items) also significantly correlated ( $r = .233$ ) with ratings of success within the total management group and within the top and middle management subgroups ( $r$ 's = .254 and .267 respectively.) These results were compared with results of other recent personnel research and the implications discussed.

- 6-19. Graham, W.R. and Johnson, C.D., "An Experimental Comparison of Inventory Validity Obtained Before and After Work Experience," Journal of Applied Psychology, 47(1), 1963, 72-74.

Are responses to inventories more valid when obtained before work experience than after work experience? Two long self-description inventories were administered to 537 soldiers. The same inventories were administered to 372 members of this sample, 18 months later and 6 months after criterion ratings of performance on maneuvers in Germany were obtained. 19 short personality and interest keys and two total score keys were developed using the before-experience responses and then the after-experience responses. 2 of the 19 personality and interest keys and 1 of 2 total score keys showed statistically significant differences between validities for the before- and after-experience responses. The cross-validity of the regression composite based on before-experience responses was .23; on after-experience responses .26.

- 6-20. Greenwood, J.M. and McNamara, W.J., "Interrater Reliability in Situational Tests," Journal of Applied Psychology, 51(2), 1967, 101-106.

This study was conducted to determine the degree of interrater reliability in situational tests and to determine the relative effectiveness of professional and nonprofessional evaluators in this type of situation. The results indicate that the reliability of observer ratings and rankings are reasonably high in several different situational tests. Of particular significance is the finding that adequate reliability can be obtained from the use of nonprofessional evaluators in business-oriented situational tests.

- 6-21. Guion, R.M., "Synthetic Validity in a Small Company: A Demonstration," Personnel Psychology, 18(1), 1965, 49-63.

Small business organizations with a great diversity of jobs face the problem of validating tests for employee selection. An alternative has been proposed under the term "synthetic validity" in which empirical validation data can be used to infer the validity of a battery of tests even for situations in which the N is too small to permit conventional validation.

This report describes the application of this concept to a small company. Despite the diversity of jobs, there was some overlapping of job descriptions. Seven elements of work proficiency which appeared in

many jobs were identified. Ratings for each employee to whom an element applied were obtained, along with a rating on over-all effectiveness. A battery of tests was validated against this group of criterion ratings, taken one at a time.

- 6-22. Guion, R.M. and Gottier, R.F., "Validity of Personality Measures in Personnel Selection," Personnel Psychology, 18(2), 1965, 135-164.

Tables are presented with summaries of validation studies for personality and interest inventories, projective measures and special inventories. In the faces of these summaries, the authors do not advocate the use of personality measures as a basis for making employment decisions.

- 6-23. Hedberg, R. and Baxter, B., "Favorableness Ratings of Forced-Choice Statements: Applicants vs. Non-Applicants," Personnel Psychology, 16(1), 1963, 23-27.

This study reports on the effects of non-applicant ratings of the favorableness of statements to be included in an experimental forced-choice test for screening life insurance agent applicants. A comparison of the favorableness ratings of applicants with non-applicants revealed differences in the perceived favorableness of statements in the middle range of favorableness. It is suggested that the choice of raters may, in certain situations, be more important than previously reported.

- 6-24. Hinrichs, J.R., "Communications Activity of Industrial Research Personnel," Personnel Psychology, 17(2), 1964, 193-204.

This article describes a work sampling study of on-the-job time allocation of technical men. Three major objectives of the study:

- (1) develop and evaluate a work sampling methodology utilizing a self-recording technique
- (2) to provide data to the company on how its professional employees spend their time as a base for programs to attain better manpower utilization
- (3) to compare questionnaire estimates of time allocation with data obtained through work sampling.

The method and results are discussed.

Two general conclusions from study

- (1) Communications are very expensive and are worthy of extensive study in any efforts to attain better manpower utilization.
- (2) The self-recording work sampling methodology appears to be an effective technique for constructing an objective picture of time allocation.

- 6-25. Hoppe, R.A. and Berve, E.J., "Measurement of Attitudes Toward Automation," Personnel Psychology, 20(1), 1967, 65-70.

The purpose of this study was to develop an instrument capable of assessing attitudes toward automation. The 22-item scale was administered to three groups:

- (1) engineers and designers of automation products
- (2) managers from an insurance company
- (3) workers displaced from their jobs because of automation.

Concurrent validity for extreme groups was established by demonstrating significant differences between the groups by analysis of variance and individual comparisons of the means of the three groups. Further analyses are needed to determine validity of the instrument for groups with less extreme attitudes.

- 6-26. Howell, Margaret A., "Developing a Single Forced-Choice Performance Evaluation Key for Several Professional Groups," Personnel Psychology, 16(2), 1963, 157-161.

The present study shows that a single score key can be used for forced-choice performance evaluations of such diverse professional groups as: physicians, dentists, nurses, and members of various scientific and medical specialties. The results showed that this single key was as valid as empirically-developed scoring keys for separate professional-occupational groups.

- 6-27. Klores, M.S., "Rater Bias in Forced-distribution Performance Ratings," Personnel Psychology, 19(4), 1966, 411-21.

The purpose of this study was to explore, in a research organization, the relationships among several possible sources of rater biases as they express themselves in a forced-distribution performance rating.

- 6-28. Kostick, M., "The Kostick Test," Personnel, 1(2), 1968, 23. (London: Journal of the Institute of Personnel Management)

A description of a new "perception and preference inventory" which is a simple method of collecting information about the candidate's personality.

Administration and scoring of test are described. Among uses of the test: development of people, counseling compatibility, recruitment and selection.

- 6-29. Landy, F.J. and Elbert, A.J., "Scaling Assumptions Underlying Weighting in Job-Classification Systems," Journal of Applied Psychology, 51(5), 1967, 442-443

The present study applied Thurstone's Law of Comparative Judgment to a job classification of hourly employees in a food-processing plant. Supervisors rated 11 job elements on importance

for overall production using a paired-comparison format. The 11 elements were scaled using three different methods: Case V solution, Case III solution and the Composite-Standard Method. Reversals in element positions were found as a function of the scaling method used. The Composite-Standard Method appeared to be the least appropriate of the three while the Case III solution seemed the most applicable, taking the inequality of element dispersions into account. A classification inequity might have resulted had the Case V or Composite-Standard values been used as element weights.

- 6-30. Lepkowski, J.R., "Development of a Forced-Choice Rating Scale for Engineer Evaluation," Journal of Applied Psychology, 47(2), 1963, 87-88.

A technique alternative to the conventional ratings of engineers by their supervisors was studied. A 20-triad forced-choice rating scale was constructed; 33 engineers were rated by their supervisors using this device. The reliability of these ratings was .90. An item analysis showed 19 out of the 20 triads to have strong discriminating power between high and low scorers. The same Salesmen were also rated in 8 different areas on a four-point scale. The reliability of the second rating scale was .87. The two scales correlated .73 with each other. These findings support previous research concerned with the more general applicability of the force-choice technique for the determination of criterion scores.

- 6-31. Levy, S. and Stene, D.M., "Construct Revalidation of a Forced-Choice Rating Form," Journal of Applied Psychology, 49(2), 1965, 122-125.

A forced-choice rating form was revalidated by using a type of construct validation based on the hypothesis that a manager's effectiveness is reflected in the performance level of his subordinates. 11 plant managers were ranked on overall effectiveness by three independent judges and the relationship between these rankings and the average performance report scores of 142 first-line supervisors in the respective plants was determined by analysis of variance and correlational techniques.

The findings support the hypothesis of a relationship between management effectiveness and subordinate performance and provide evidence to indicate continued validity of the rating instrument.

- 6-32. Lipsett, Laurence, "How Accurate are Psychologists' Predictions of Job Success?" Personnel Journal, 47(2), 1968, 91-94.

Psychological evaluations of 135 employees in nine different companies were made by the Rochester Institute of Technology's Counseling Center and compared with the companies' evaluation of the employee's success on the job. The counseling center was 75% accurate in its predictions of job success or failure. The company statements on these employees often mentioned personality characteristics in



connection with job success or failure. The Counseling Center emphasizes personality testing since the companies reporting, most often cited personality characteristics of their employees rather than intellectual factors or job-related skills in association with job success or failure.

- 6-33. Lodahl, T.M. and Kejner, M., "The Definition and Measurement of Job Involvement," Journal of Applied Psychology, 49(1), 1965, 24-33.

The purpose of the present research was to define job involvement, develop a scale for measuring it, gather evidence on the reliability and validity of the scale and to learn something about the nature of job involvement through its correlation with other job attitudes. This paper describes the development and validation of a scale measuring job involvement; the resulting scales are presented and the relation between job involvement and other job attitudes is discussed.

- 6-34. Martin, Robert A., "The Inviolable, But Invalid Employment Predictors," Personnel Journal, 47(1), 1968, 20-22.

"Success predictor" tests do not inevitably result in success. Nor does the lack of predictor qualities foretell certain failure. Reliance on tests which have not been validated in screening out acceptable applicants can result in loss of many needed skills. Reference is made to four studies which failed to establish a conclusive relationship between job "success" (in terms of salary level usually) and such factors as grades, school quality and others. The personnel manager is cautioned against blind acceptance of unproven assumptions and predictors in the selection process.

- 6-35. Meyers, J.H., "Removing Halo from Job Evaluation Factor Structure," Journal of Applied Psychology, 49(3), 1965, 217-221.

Intercorrelations of job-evaluation ratings were factor analyzed under two conditions:

- (a) the original matrix, produced directly from raters' initial evaluations and
- (b) a "reduced" matrix resulting from partialling out job level from all original intercorrelations in the hope of removing a general "halo" factor characteristically emerging from job-rating studies. Comparisons of factors from each matrix showed a definite reduction of halo in the "reduced" matrix, as well as more meaningful factor structures for most factors.

- 6-36. Michael, W.B. and Tenopyr, Mary L., "Comparability of the Factored Dimensions of Personnel Ratings Obtained Under Two Sets of Instructions," Personnel Psychology, 16(4), 1963, 335-344.

The authors attempted an empirical determination of the

psychological properties of the dimensions of personnel evaluations when they are associated with two different purposes in the rating process, and to make a comparison of two statistical approaches. (Burt's index of similarity and Maxwell's Chi square test,) to the demonstration of factorial invariance.

- 6-37. Parry, Mary Ellen, "Ability of Psychologists to Estimate Validities of Personnel Tests," Personnel Psychology, 21(2), 1968, 139-147.

The purpose of this study was to compare the validity estimates of ten psychologists, with validity coefficients obtained by correlating employees' test scores and a job performance criterion. Three departments of a large department store were used; Merchandise Clerical, Stock Records Clerical and Supervisory Trainees. The correlations between test scores and merit ratings were generally higher for the two clerical departments than for the Supervisory Trainee Department.

The means of the psychologists' estimates of the test validities were not significantly correlated with the actual results for any of the three departments. However, the psychologists were better able to predict magnitude than relative magnitude of the validity coefficients.

- 6-38. Peters, D.L. and McCormick, E.J., "Comparative Reliability of Numerically Anchored versus Job-task Anchored Rating Scales," Journal of Applied Psychology, 50(1), 1966, 92-96.

This study compared the effectiveness with which job-task anchored equal-appearing interval scales could be used in contrast with scales anchored only by simple numerical benchmarks. Two groups of judges rated identical lists of job-task statements in terms of both types of scales. Ratings were made on five sensory/physical dimensions of job activities. The reliabilities of ratings for all scales were computed by an analysis of variance approach. In a test of statistical significance across all five scale dimensions it was found that job-task anchored scales could generally be used with significantly greater reliability than simple numerically anchored scales.

- 6-39. Peterson, D.A. and Wallace, S.R., "Validation and Revision of a Test in Use," Journal of Applied Psychology, 50(1), 1966, 13-17.

The problems of evaluating a test when it is being used are discussed. Data are presented for a test when "in use" and in a "five but don't use" condition. Emphasis is placed upon the effects of indirect curtailment when a test is being correctly used with other valid selection instruments. This phenomenon presents problems both for evaluating a test and for the appropriate weighting of tests in a battery. This may be a major problem in applied selection research programs.

- 6-40. Smith, Patricia C. and Kendall, L.M., "Retranslation of Expectations: An Approach to the Construction of Unambiguous Anchors for Rating Scales," Journal of Applied Psychology, 47(2), 1963, 149-155.

A procedure was tested for the construction of evaluative rating scales anchored by examples of expected behaviour. Expectations, based on having observed similar behaviour, were used to permit rating in a variety of situations without sacrifice of specialty. Examples, submitted by head nurses as illustrations of nurses' behaviour related to a given dimension were retained only if reallocated to that dimension by other head nurses and were then scaled as to desirability. Agreement for a number of examples was high and scale reliabilities ranged above .97. Similar content validity should be obtained in other rating situations.

- 6-41. Trattner, M.H., "Comparison of Three Methods for Assembling Aptitude Test Batteries," Personnel Psychology, 16(3), 1963, 221-32.

A factored battery of 13 aptitude tests was administered to samples of approximately 200 journeyman employees. Performance ratings were obtained from first and second level supervisors. Three basic methods for selecting and weighting tests from the aptitude battery were compared. The tests were selected on the basis of results obtained on one sample of employees in each job series and then applied to the second or independent sample to test the significance of the validity coefficients.

The three test selection methods utilized were:

- (1) Wherry-Gaylord Integral Gross Score Weight Method
- (2) Civil Service Commission Job Analysis Method
- (3) General Blue Collar Test Battery

It appeared that one test selection method was as effective as another. The implications of these results are discussed.

- 6-42. Treadwell, Y., "Development and Analysis of a 'Cumshaw Tolerance' Scale," Journal of Applied Psychology, 49(2), 1965, 126-130.

A 9-item scale to measure employee attitudes toward "cumshaw" (misuse of company time or material) was developed through the Guttman scaling process. Scores on the experimental version of the cumshaw tolerance scale were then correlated with selected psychological and social-group variables. Differences in cumshaw tolerance were found to be associated with the group variables of age and educational level but occupational groups did not differ significantly in relative cumshaw tolerance. Individual differences in selected psychological variables could not account for individual differences in cumshaw tolerance.

- 6-43. Waters, L.K., "Effect of Instructions and Item Tone on Reactions to Forced-Choice Pairs," Personnel Psychology, 19(3), 1966, 297-300.

Rater resistance has been considered one of the major objections to the forced-choice rating procedures as used with a variety of self-report inventories, but available research data is limited. The purpose of this study was to compare rater reactions to self-descriptive forced-choice pairs using three responding instructions at three item tone levels.



## 7. COMPUTER ASSISTANCE IN MANPOWER MANAGEMENT

- 7-1. Austin, Barrie, "The Role of EDP in Personnel," Management of Personnel Quarterly, Winter, 1965, 24-30.

A report on the author's investigations of what was being done and what was being planned in major Michigan companies and one large federal government department in connection with personnel uses of EDP.

- 7-2. Bueschel, Richard T., American Management Association, New York, Management Bulletin No. 86, 24 pp., 1966, \$3; \$2 to AMA members.

Discusses the results of a 1966 survey of 89 organizations regarding their current use of and future plans for, data processing with special reference to real-time systems. Other possible applications to personnel data are suggested and some predictions are made about the impact of the computer on the personnel function.

- 7-3. Bueschel, Richard T., "How EDP is Improving the Personnel Function," Personnel, Sept/Oct. 1964, 59-64.

Discusses the application of EDP to records and administration, wages and salaries, skills, inventories and employment. Emphasizes the importance of good planning before making any such applications.

- 7-4. Glaser, G., "Plain Talk About Computers," Business Horizons, Vol. 10, Fall, 1967, 33-8.

Computer is studied in terms of its technological advancement, costs and personnel trends already emerging from its use, its changing applications and its feasibility as corporate systems.

- 7-5. Hill, Walter A., "The Impact of EDP Systems on Office Employees: Some Empirical Conclusions," Academy of Management Journal, March, 1966, 9-19.

Discusses effects of EDP systems on numbers of office employees, employee displacement, types of jobs affected, the nature and magnitude of employee adjustments, EDP positions and job requirements, and the management-employee ratio. 7 conclusions are presented at end.

- 7-6. Karzin, A.J., "Computerized Job Matching," Employment Service Review, Vol.4, July, 1967, 38-40.

Progress in development of proposed nationwide system to replace Employment Service's restrictive local office methods of gathering, processing and disseminating all types of manpower information is reported.

- 7-7. Knowles, Daniel E., "The Personnel Man as Business Systems Engineer," Personnel, March/April, 1964, 41-44.

Gives concrete examples of the application of systems analysis in the personnel department. These show that the personnel administrator needs to "know his way around" in the field of integrated data processing in order to be alert to the possibilities for cost saving which its use entails.

- 7-8. Lanham, Elizabeth, "EDP in the Personnel Department," Personnel American Management Association, New York, March/April, 1967, 16-22. \$1.75; \$1.25 to AMA members.

Brief report on a survey of 333 companies approximately 1/2 of them in manufacturing. Covers extent and reasons for utilization of EDP, administrative arrangements, selection and training of employees for personnel EDP work, records and reports processed, cost aspects, problems encountered and advantages.

- 7-9. Lee, H.C., "Electronic Data Processing and Skill Requirements," Personnel Administration, 29(3), 1966, 49-53.

Discusses such questions as the effect of technological development on skill requirements. Reports a research study in a large shoe manufacturing firm and the effect of a computer installation in terms of requirements for skilled and unskilled personnel.

- 7-10. McDonald, Charles H., "Data Automation and the Personnel Manager," Personnel Journal, 45(4), 1966, 209-211.

In many cases, "exploitation of the potential of EDP as applied to personnel management" has been "inefficient and limited." Steps are outlined for rectifying this situation within the organization and the advantages of a master personnel record for each employee as the central feature of an automated information system are pointed out.

- 7-11. Morrissey, C.A., "Long Range Planning in Personnel: Impact of the Computer," Personnel Administration, 31(2), 1968, 35-38.

Most surveys of computer utilization by management indicate little or no application in the personnel function. This article discusses several types of personnel information best handled by the computer, including:

- 1) manpower projections given a rate of growth.
- 2) keeping track of job candidates; who was interviewed, what letters were written him, etc.
- 3) comparisons of wage and salary structures with any other by job code; by location
- 4) measurement of turnover, reasons, by department, by area.

- 7-12. Myers, Charles A., "Some Implications of Computers for Management," Proceedings of the 19th annual winter meeting, I.R.R.A., San Francisco, Dec. 28-29, 1966, The Association, 1967, 189-201.  
On the basis of studies done at M.I.T., the author comments on the effects of computers and the associated "information technology" on the structure of industrial organizations including (199-200) the implications for personnel administration.
- 7-13. Personnel Management and the Computer, Princeton, N.J., Princeton University, Industrial Relations Section 1967, (Selected References, no. 138)  
References from magazines and books are directed to impact of the computer on personnel function.
- 7-14. University of California, Institute of Industrial Relations (Los Angeles) 9244 Social Science Building, EDP and Personnel Management; proceedings of an intensive one-day conference, July 29, 1965. Los Angeles, California, 90024. The Institute, 1967, 66 pp.  
Eight papers by representatives both of firms specializing in data processing and of firms with experience in its applications in the personnel field. Topics covered include:  
"How Computer Techniques can Help in Personnel Management"  
"The Impact of Data Processing on Personnel Management"  
"Getting Started in Data Processing"  
"Personnel Records Processing with EDP"  
"Data Processing and Personnel Research"  
"The Skills Inventory"
- 7-15. Vergin, R.C., "Staffing of Computer Departments," Personnel Administration, 28(4), 1965, 6-12.  
Realistic guidelines for effective personnel management of EDP units are presented, based on a survey of 11 companies. Better planning, which can overcome personnel difficulties is especially vital for the firm considering computerization. Discusses problems in recruitment, selection, training, turnover, promotion.
- 7-16. Wille, E., The Computer in Personnel Work, Institute of Personnel Management, Oxford Circus, London, 1966.  
Sets out principles of business systems planning and use of computer eg. planning with the computer, defining the departmental function, defining the departments' information needs, designing the system.

## 8. MISCELLANEOUS

- 8-1. Alain, Touraine and Associates, Acceptance and Resistance, Paris: Organization for Economic Co-Operation and Development. 2 rue Andre Pascal, 1965.

Contains an integration of research and writings on workers' attitudes toward technical, organizational and social change. Chapter heading include:

- 1) attitudes to technical change.
- 2) attitudes to organizational change.
- 3) attitudes to social change.
- 4) trade union action.

There are some prescriptive remarks on the introduction of change.

- 8-2. Barrett, R.S., "Performance, Suitability and Role Agreement: Two Factors Related to Attitudes," Personnel Psychology, 16(4), 1963, 345-357.

It was the purpose of this investigation to examine the significance of the perceptions of incumbents on jobs regarding:

- 1) how they did their work.
- 2) how they thought their work should be done.
- 3) how they thought their immediate supervisor wanted the work to be done.

It was predicted that different patterns of consistency and inconsistency among these three perceptions would be related to attitudes of the incumbents regarding themselves, their work and their supervisors. Results and discussion are presented.

- 8-3. Bass, Bernard M., "Interface Between Personnel and Organizational Psychology," Journal of Applied Psychology, 52(1), 1968, 81-88.

The first part of this report delineates the importance of organizational considerations to the personnel psychologist as he concentrates on recruiting, selection, training, job design etc. The second part deals with the converse, the importance of personnel considerations to the organizational psychologist as he deals with problems of morale, supervision, teamwork, organizational design and conflict resolution.

- 8-4. Berry, Dean F., The Politics of Personnel Research, Ann Arbor: Bureau of Industrial Relations, Graduate School of Business Administration, University of Michigan, 1967.

This is a monograph designed for persons in personnel research. A survey of most of the personnel research departments in the country was undertaken. Comparisons on the ways that different companies carry out research was made. The author emphasizes a need for formal



objectives in research departments and interdisciplinary research. Includes case histories as to how some of the country's larger companies have approached specific problems.

- 8-5. Bradhurst, M.W., "Is Overtime Always the Answer," Supervisory Management, Vol.12, August, 1967, 10-14.

Intangible costs of overtime such as tension, stress and higher accident rates are discussed.

- 8-6. Burack, Elmer H., "Industrial Management in Advanced Production Systems: Some Theoretical Concepts and Preliminary Findings," Administrative Science Quarterly, December 1967, 479-500.

This paper discusses some implications of technological modifications and improvements on industrial management in "process" and "quasi- process" systems. Technological advances influence functional relationships, responsibilities and affect the development of an organizational control system. Analysis is based on field research studies as well as studies reported in literature. The managerial-supervisory job functions emerging in these advanced systems provide a basis for additional consideration being given to a key executive function such as managerial manpower planning.

- 8-7. Fleishman, E.A., "Attitude Versus Skill Factors in Work Group Productivity," Personnel Psychology, 18(3), 1965, 253-366.

The study extends some previous information on the effects of participation on resistance to change and on productivity. It appeared in this study that direct participation of individual workers may not be as important an incentive as their perception of the group's participation in these work changes.

- 8-8. Gardell, B., "Plant Relocation, Personnel Planning and Employee Reaction," Personnel Administration, Vol.29(5), 1966, 41-44.

What problems are posed by plant relocation? What employee reactions are encountered? How can adequate personnel planning meet these problems? Describes some steps taken in a plant relocation example:

- 1) a special exhibition showing a model of the new plan.
- 2) a booklet describing the new place of work and working conditions.
- 3) repeated trips to the new location.
- 4) an attitude study.

Gives results in terms of people who stayed with the firm, after transfer.

- 8-9. Gruenfeld, L.W. and Foltman, F.F., "Relationship Among Supervisors: Integration, Satisfaction and Acceptance of a Technological Change," Journal of Applied Psychology, 51(1), 1967, 74-77.

This study investigated how the integration and satisfaction of supervisors with management affected their acceptance of a technological change. Attitude questionnaires were administered to 40 first-line supervisors to measure attitude toward the change and several dimensions of integration and satisfaction.

The results showed that supervisors who are relatively more integrated with the management group, more satisfied with management and relatively high in job satisfaction are more likely to accept a management-initiated technological change.

- 8-10. Hardin, E., "Characteristics of Participants in an Employee Suggestion Plan," Personnel Psychology, 17(3), 1964, 289-303.

Nonparticipants, unawarded suggesters and award recipients in a medium-sized insurance company with a suggestion plan system were compared as to personal characteristics, own attitudes and attitudes of supervisors. Age, labor force attachment, work experience and value placed on order and regularity differentiated the participants from the non-participants. Supervisors were found to influence the success of the suggestion plan.

- 8-11. Hoos, Ida R., "The Personnel Administrator and Technological Change," Public Personnel Review, July, 1963, 152-157.

Suggests ways in which the personnel administrator can serve the organization introducing automation into clerical operations by taking steps to preserve morale and to maximize utilization of the existing work force.

- 8-12. Jones, S., "The Feasibility of Personnel Management in Industrial Research Organization," Personnel Administration, 26(6), 1963, 22-29.

A survey conducted suggests that general personnel policies cannot be applied uniformly to research and development units.

- 8-13. Keene, C.M., "Classification Standards for the Personnel Function," Personnel Administration, 26(4), 1963, 33-38.

Are professional goals of personnel managers at variance with actual accomplishments and personal philosophies? This case study raises some pointed queries about the state of the personnel art.

- 8-14. Kraut, A.I., "Behavioral science in Modern Industry," Personnel Administration, 30(3), 1967, 32-37.

Describes the applications of behavioral science in recruitment, testing, training, opinion survey promotion and demotion and motivation. Also describes Likert's system approach.

- 8-15. Mechanic, D., "The Power to Resist Change Among Low-Ranking Personnel", Personnel Administration, 26(4), 1963, 5-11.  
Rank and file workers have real but often unrecognized power which may help, hamper or harass management. Implications for co-operation and introduction of change are discussed.
- 8-16. Munson, Fred C., "Personnel: Agent of Change in the Corporation," Management of Personnel Quarterly, Winter, 1962, 18-23.  
Discusses what role the personnel staff should play in connection with the introduction of change.
- 8-17. Nadeau, J.R., "Come to the Wake of the Personnel Director," Canadian Personnel and Industrial Relations Journal, 14(5), 1967, 25-28.  
Satirical account of beginning and present status of personnel administrator advocates termination of that position.
- 8-18. Patchen, M., Some Questionnaire Measures of Employee Motivation and Morale, University of Michigan, Survey Research Center Monograph No. 41, 1965.  
The reliability and validity of questionnaire measures of 5 employee attitudes are assessed.
- 1) job motivation
  - 2) interest in work innovation
  - 3) willingness to disagree with supervisors
  - 4) attitude to change
  - 5) identification with work organization
- for each, reliability and validity of items is assessed.
  - best items formed into indices for the attitude.
- 8-19. Phelan, J.G. and Goldberg, R., "Personnel Implications of Recent Small Group Research," Personnel Administration, 30(4), 1967, 51-55.  
This paper is a brief introduction to the personnel implications of recent research on groups. These studies, carried out in the main by social psychologists and behavioral scientists, have come to have a direct bearing on industrial organization theory, and in turn, on the management of personnel.
- 8-20. Rezler, Julius, "Automation and the Personnel Manager," Advanced Management Journal, January, 1967, 76-81.  
Reports the results of a survey of 38 Chicago personnel managers concerning "the indirect effects of automation on personnel function and organization." Personnel activities most affected were hiring, training, and organization planning. The author concludes that, because the personnel job will become more complex, the training of personnel managers "will have to be basically updated."

- 8-21. Rickard, T.E., Triandis, H.C., and Patterson, C.H., "Indices of Employer Prejudice Toward Disabled Applicants," Journal of Applied Psychology, 47(1), 1963, 52-55.

A scale to measure prejudice toward disabled applicants for employment, based upon the multifactor stimuli method of Triandis was developed. The scale was used with 2 samples, a group of 18 personnel administrators and 87 school administrators. All disabled groups were subject to expressed prejudice. The method can be used to measure prejudice of various groups toward various disabilities in various settings.

- 8-22. Seashore, Stanley E., Assessing Organization Performance with Behavioural Measurements, Foundation for Research on Human Behaviour, Ann Arbor, Michigan, 1964.

Report of a meeting attended by representatives of 21 business firms and 3 universities. Presents several viewpoints on the ways in which measurements of attitudes, morale and behaviour can be obtained and used. The participants conclude that behavioral measurements are useful and further study should be undertaken to perfect them.

- 8-23. Shimmin, Sylvia and Gwynneth de la Mare, "Individual Differences in Overtime Working," Occupational Psychology, 38(1), 1964, 37-47.

An exploratory study of the variables associated with individual differences in overtime working among a group of monthly paid workers is described in this paper. (350 overseas telegraph operators). Some of the isolated variables discussed are: family responsibility, attitudes toward the job, and aspirations, values and mode of life.

- 8-24. Sproule, R.E. and Loucks, K.E., "A Profile of the Personnel Practitioner," Canadian Personnel and Industrial Relations Journal, 14(5), 1967, 11-18.

Answers to questionnaire tell what kind of person is attracted to career in Canadian personnel field, where he comes from, his educational background and experiences, number of years he has worked in field and what he is doing.

## FACULTY OF COMMERCE AND BUSINESS ADMINISTRATION

### Editorial Board

Secretary: *James Currie*

Chairman: *Richard Mattessich*

#### Members:

*James D. Forbes*  
*James C.T. Mao*

*Robert E.G. Nicol*  
*Bernhard Schwab*

- |                         |   |
|-------------------------|---|
| <b>Paper No. 1:</b>     | Canada and the European Common Market,<br>by <i>William Hughes</i>  |
| <b>Paper No. 2:</b>     | The Resolution of Some Paradoxes in Accounting,<br>by <i>Raymond J. Chambers</i>  |
| <b>Paper No. 3:</b>     | Urban Redevelopment Policies,<br>by <i>Philip H. White</i>  |
| <b>Paper No. 4:</b>     | Property, The Forgotten Dimension in Planning and Public<br>Appropriation of Unearned Land Values<br>by <i>D.R. Denman</i>  |
| <b>Monograph No. 1:</b> | Business Income, Business Finance, and the Carter Report,<br>by <i>Calvin C. Potter</i>   |
| <b>Monograph No. 2:</b> | Colloquium on Computer Applications in Real Estate Invest-<br>ment Analysis,<br>by <i>Richard U. Ratcliff</i>   |
| <b>Monograph No. 3:</b> | Guidelines for Manpower Managers, A Selected Annotated<br>Bibliography<br>by <i>Larry F. Moore</i>  |
| <b>Reprint No. 1:</b>   | Budgeting Models and System Simulation,<br>by <i>Richard Mattessich</i>   |
| <b>Reprint No. 2:</b>   | A Model of Vertical Integration Strategy,<br>by <i>Frederick A. Webster</i>   |
| <b>Reprint No. 3:</b>   | A Capital Budgeting Approach to Depreciation and Deferred<br>Income Taxes,<br>by <i>R.E. Blaine</i>   |
| <b>Reprint No. 4:</b>   | A Decision Theory Approach to Portfolio Selection,<br>by <i>James C.T. Mao and Carl Erik Sarndal</i>  |
| <b>Reprint No. 5:</b>   | Municipal Accounting in Canada and its Relevance to Reality,<br>by <i>A. Beedle</i>   |
| <b>Reprint No. 6:</b>   | Business Games vs. Cases as Tools of Learning,<br>by <i>Larry F. Moore</i>  |
| <b>Reprint No. 7:</b>   | Comparative Study of Need Satisfactions in Military and<br>Business Hierarchies and Comparative Managerial Role<br>Perceptions in Military and Business Hierarchies,<br>by <i>Vance F. Mitchell and Lyman W. Porter</i> |
| <b>Reprint No. 8:</b>   | Operations Research and Accounting: Competitors or Partners?<br>by <i>Richard Mattessich</i>  |
| <b>Reprint No. 9:</b>   | Efficiency in Public Urban Renewal Expenditures through<br>Benefit-Cost Analysis,<br>by <i>James C.T. Mao</i>   |



- Reprint No. 10:** Management Services - Concepts to Guide Management,  
by *Brian E. Burke*
- Reprint No. 11:** The Economics of Sharing Computers,  
by *Bernhard Schwab*
- Reprint No. 12:** Systemsimulation und neue Aufgaben des betrieblichen  
Rechnungswesens,  
by *Richard Matlessich*
- Reprint No. 13:** Evaluating Investment Performance,  
by *C.L. Mitchell*
- Reprint No. 14:** Evaluation of Tax Shields Derived From Depreciation Allow-  
ances, and From Double-Declining-Balance to Sum-of-the-  
years'-Digits Depreciation: An Optimum Switching Rule,  
by *Robert E.G. Nicol and Bernhard Schwab*

